

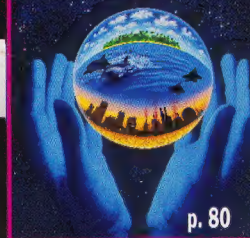
REVIEWS

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EDITORS' CHOICE
GLOBAL EFFECT

PC

GAMES



p. 80

October 1992

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- Spellcraft: Aspects of Valor
- Ultima VII: The Black Gate

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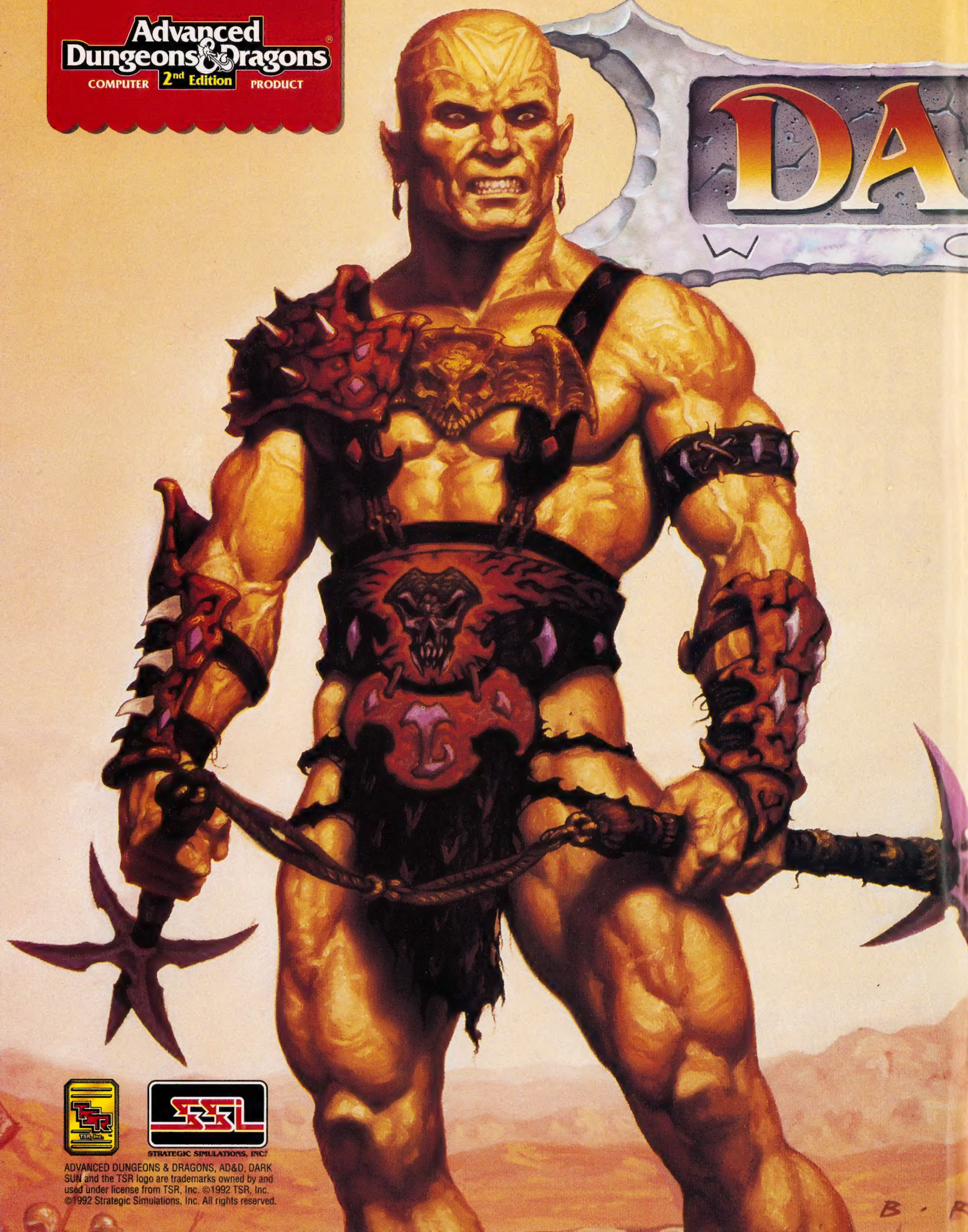
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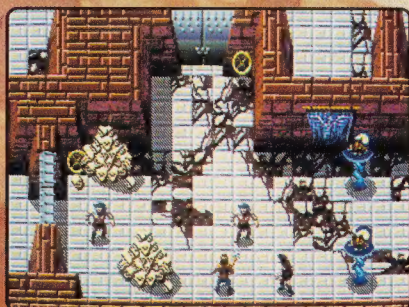
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Screens shown: 256-color IBM VGA.



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30 FANTASY IN THE FAST LANE

by Bernie Yee

They'll blow you away — three-dimensional worlds and rich plot lines make today's state-of-the-art role-playing games a whole new experience. No longer are you limited to cavernous settings deep underground — now you have whole towns and entire continents to explore. Pull up a chair and sink into digital gore, gold, and glory as you tour the fantastic worlds of *Crusaders of the Dark Savant*, *Prophecy of the Shadow*, *Spellcraft: Aspects of Valor*, and *Ultima VII: The Black Gate*.

36 PLAY HARD

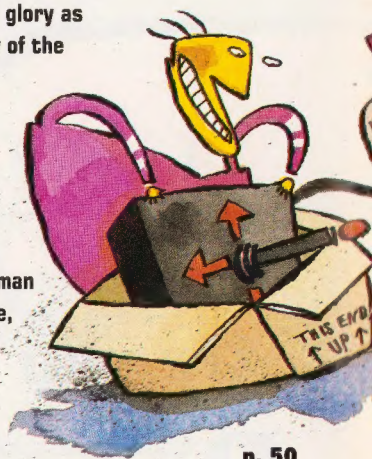
by Wayne Kawamoto

Sports games are growing up — pushing the technology as hard as flight simulators and displaying the kind of graphics detail that made top-notch role-playing games famous. See what PCGames has to say about this five-man team: *Hardball III*, *John Madden Football II*, *The Games: Summer Challenge*, *Michael Jordan In-Flight*, and *Carl Lewis Challenge*.

44 THIS OLD PC

by Peter Olafson

New high-end machines may inspire a certain manic passion, but you ain't seen nothin' yet. Give your game playing a new lease on life: Beef up your system with sound, memory, peripherals, strategy guides, and add-on disks. PCGames shows you what's hot, what's not, and what's around the corner.



p. 50



p. 36

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There's only one way to find out. Jump into *Wing Commander*, the game series that defined interactive entertainment on the PC. You're whisked to the front lines and left in the middle of an intergalactic brawl with a bunch of flea-bitten, battle-scarred felines from Kilrah.

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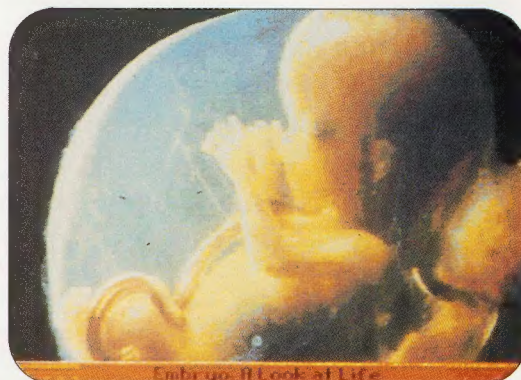
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Wizardry

A Fantasy Role-Playing Simulation by D.W. Bradley

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EDITOR'S PAGE

FUN WITH FICTION

In the June 21, 1992, edition of the *The New York Times Book Review*, writer Richard Coover's article "The End of Books" suggests that the traditional novel is in danger of being replaced — or at least surpassed — by hypertext.

Hypertext refers to works that offer a variety of choices and results — works that Coover refers to as "nonlinear and non-sequential." "There are no hierarchies in these topless (and bottomless) networks, as paragraphs, chapters and other conventional text divisions are replaced by evenly empowered and equally ephemeral window-sized blocks of text and graphics — soon to be supplemented with sound, animation, and film," Coover writes.

The works that Coover envisions already exist — mostly in the form of entertainment products featuring elaborate storylines, rich graphics, soundtracks, and so on. In fact, many game publishers refer to their products as "interactive fiction." The analogy is more often to movies than books, but the description is close to what Coover defines in his article.

But that's where Coover misses the point. He envisions hypertext as *literature* — and that's the same mistake that some of us in the software industry make when we suggest that this type of entertainment will someday replace or compete with books and movies. It's simply wrong for anyone to think that people will turn to computer-based hypertext or interactive fiction for the same reasons they read a book or go to the movies. Films and novels appeal to us because we want to be drawn into someone's story or interpretation. Interaction is fun, but we don't always want to interact to control or change the story's outcome. Coover also sees this as problematic. "If everything is middle," he asks, "how do you know when you are done, either as a writer or a reader?"

Whether you call it hypertext, interactive fiction, or just entertainment software, don't fall into the trap of thinking that traditional fiction is antiquated technology. As CD-ROM gains momentum, we envision elaborate plots with multiple paths and outcomes. Storylines will be supplemented by advances in sound, graphics, and animation. But when you begin to tire of directing the action and playing the role, sit down with the *The Scarlet Letter* or plug in *Casablanca*. You may know how they end, but you can't beat the delivery.

HEY, HEY, HEY ... GOODBYE

It's with mixed emotions that I step down as editor in chief of *PCGames*. While I'm excited by the opportunities of my new position, I'll miss sharing this space with you every issue. I'll also miss the many friends I've made in the computer-entertainment industry. My only parting advice to you (which I'm ashamed to say comes from a sneaker commercial) is this: Life is short — play hard. — Dan Muse, Editor in Chief

PC GAMES

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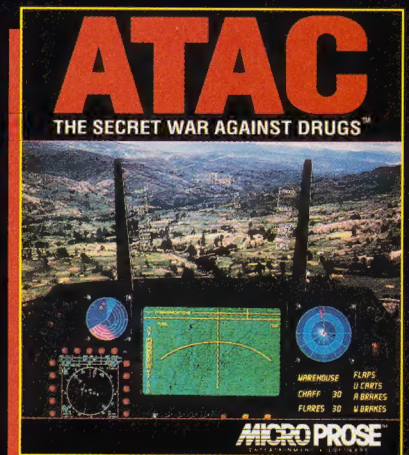
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MAILBAG

The People Speak . . .

I agree with Eric Toll ("Quarterly Results," Mailbag, January/February 1992, p. 6): *PCGames* isn't published often enough. Other magazines pale in comparison with *PCGames*, which, I'm sad to say, is apparently not available by subscription.

When I phoned the number I found (after some difficulty) in *PCGames* for subscriptions, I was told there were none available. This seems strange to me. In the current economic depression, I'd think you'd be trying to get all the readers you could, not turning them away.

PCGames has my vote for the best computer-game magazine around — but not only should it be published more often, it should be made more easily available to readers who have a hard time finding it.

Ian Fraser
Stratford, Ontario, Canada

I'm addicted to *PCGames*: It's absolutely the best computer-gaming magazine around. It's too bad it comes out only four times a year. That sparked a few questions in my mind: Why is *PCGames* published only four times a year? Since it comes out so infrequently, where should we go for game reviews during all the other months? Do you publish a different PC-game magazine more often? Can you recommend a good complement for the addicted PC gamer?

Matt Bailey
Kirkland, WA

I like to buy games all year 'round, so I don't wait for *PCGames* reviews even though I like them — especially your honesty in describing the games' faults. Please publish *PCGames* monthly.

Alan Robinson
Floyd, VA

Didn't anybody enjoy PCGames' clever schedule of publishing only in months with 31 days and an "R" in them, except in leap years?

By popular demand, PCGames is now published eight times a year: in October (the issue you're reading), November, December, January, February/March, April/May, June/July, and August/September.

PCGames' perceptive financial officers have also decided that it makes sense to let people pay us in advance for future issues: An eight-issue (that's one year) subscription costs \$19.95. Just call (800) 343-0728, or remove one of those annoying insert cards in this issue and return it with your name, address, and check, money order, or credit-card info. — eds.

Don't Want My MPC

I'm worried that you're leading people astray when you tell them how great this new MPC standard is. I was at my local PC store and talked to a salesperson about MPC computers; he said the system has so many flaws his company doesn't even stock any of the compatible software or hardware.

Ben Teeter
Portland, OR

Let's see. Store doesn't have any MPC (multimedia personal computer — a set of standards developed by software giant Microsoft) equipment to sell. Salesperson says it's no good. Would his opinion have been the same if the store did have some MPC games or upgrade kits in stock?

Dan Muse said this in our Spring/Summer issue ("Keep Madonna — We've Got Carmen," Editor's Page, p. 6): "As a long-term standard, MPC leaves many questions unanswered . . . We hope MPC becomes more than a logo." In the same issue, Doug Barney considered "Multimedia Madness" (p. 76) and asked, "Is MPC ready for prime time?" "Not quite"

was his answer. For still other perspectives on the issue, see our Child's Play and Peripheral Vision columns in this issue, pp. 26 and 28, respectively. — eds.

Can't Quit

I've noticed what to me is an abomination in a small number of computer games: no exit-to-DOS routine in games that took months, if not years, and thousands of dollars to develop. Most recently I noticed this lack in **Spacewrecked** from Konami.

I myself hope to be a game programmer in the future, and I'm appalled. Is a simple exit-to-DOS command too much trouble for some programmers? Are they lazy? I say fix the problem or get out of the business.

Bernie Durfsee
Newburgh, NY

Our reviewer, Peter Scisco, noted in the Spring/Summer issue (p. 100) that Spacewrecked was not only an "addictive encounter with aliens," but that it was "certainly hard to leave [the game] — you literally have to reboot the computer to quit." — eds.

Help Is On the Way

A reader named A. Anderl was looking for a backgammon game for the PC (Mailbag, October 1991, p. 6). I recently purchased **Backgammon** from Spinnaker Software (1 Kendall Square, Cambridge, MA 02139, 617-494-1200).

This game has color graphics, five playing levels, optional doubling cube, on-line advice, and a "take back your last move" option. It even lets you set the board with a difficult roll for practice. The recommended list price is \$19.95, but I found it for \$9.95 at a discount store.

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CREDIT CARD ORDERS ONLY

Maybe someone can help me. My daughter has an Apple IIcs and plays a shareware game called **Milestones**, which is based in the French card game Mille Bornes. We used to enjoy playing the card game as well. Does anybody know if such a game is available for PCs?

Frances Willig
Jersey City, NJ

When I first began messing around with computers, there was one game I fell in love with. It wasn't filled with great graphics, just fun and challenge. The name of the game was **Rogue**. After nearly six years, I want to find a new copy, but I'm having no luck. I believe **Rogue** was produced by Epyx, but Epyx doesn't answer my letters. I have an older version of **Rogue** called **Amulet of Yendor** or simply **Hack** — it's basically the same game, but was written for mainframes.

Ricky Hadden
Key West, FL

Ghost Writer

I'm writing about the recent letters condemning the use of pirated software. I'm in my first year of college and am planning to seek out the lowly and forgotten job of game programming in the future. I'm also a BBS phreak and 90 percent of the 150 or so games I own I obtained from these boards.

What I want to say to people is that a lot of "twisted scum" like myself use pirated copies as a way of previewing a game. I'm not a rich person and can't afford to pay \$50 or \$60 for a game just to have it turn out lame — and once the box has been opened you can't return it.

When I get the money I plan to buy a copy of each game I like. Only five or six are worth the money — the rest are junk that look as though they were thrown together in a matter of days, if not hours. If I had bought and paid for them I would have felt cheated. I know there are a lot of hackers and

the like who feel the way I do, and I hope computer-gaming companies will stop trying to reap enormous profits by releasing garbage the buyer's stuck with.

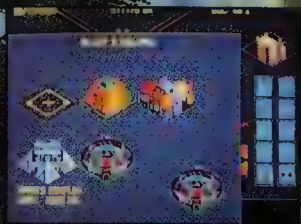
Phantom Lord
(name and address
withheld by request)

In the first place, Phantom, about those 135 or so games you "own": You don't own them, you stole them. Even by your own logic, they're "borrowed" or "in testing." But your haste to claim that you own them betrays you.

It's an interesting notion — that theft is excusable if the stolen goods were too expensive. Judges, however, have been remarkably cool toward it in court.

Shareware is a concept that might interest you. Some programmers write software and give it away, asking that only those users who like the game and play it often send payment for it. Some authors let the buyer decide how much money; some ask only for a postcard or a donation to a

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selected charity. The system depends on faith and good will on the part of the seller and the buyer. You display neither, however, so perhaps shareware wouldn't be such a good way for you to collect games after all.

— eds.

Wrong Side of the Law

How can I contact Cinemaware Corporation? I'm a fan of the company's great adventure game **It Came from the Desert**. Too bad all adventure titles aren't as exciting as Desert — it's got a great combination of arcade action and role play.

On another topic, I want to state that I'd like to punch out all these people who are pirating computer games. I own 19 simulations and not one of them is pirated. Pirating is just a fancy word for stealing — against the law, you know? If you pirate, you're cutting your own throat: The company won't make money, and programmers, the people who bring us

so much pleasure and enjoyment, will find themselves out of work. Developers can continue to produce and market new and innovative games only if they have jobs left to do it with, no thanks to the thieves out there.

I've heard that the Software Publishers Association is trying to stop program theft. Computer-game manufacturers should put a few bucks into some sort of public-awareness fund (perhaps channel it through the SPA) and produce some television commercials urging the game-playing public to do the right thing.

Pirating is nothing more than stealing from game-development companies, from me, from you, and from every one of the rest of us who play games. This crime hurts everybody in the computer-gaming community.

Steve Gatewood
Brownsville, TX

Cinemaware is no longer in business, and at press time PCGames was unable to

determine whether any other company was marketing its MS-DOS titles. The SPA's address is 1730 M Street Northwest, Suite 700, Washington, D.C. 20036, (202) 452-1600.

— eds.

If you have comments, questions, or suggestions, write and let us know what you're thinking. We reserve the right to edit letters for clarity, style, and space. Address your correspondence to Mailbag, [PCGames](#), 80 Elm Street, Peterborough, NH 03458.

CORRECTION

The screen shot on p. 22 of our August/September 1992 issue (Sports Page) is taken from Earl Weaver Baseball II, from Electronic Arts (not SSI's Tony La Russa's Ultimate Baseball, as noted in the caption).

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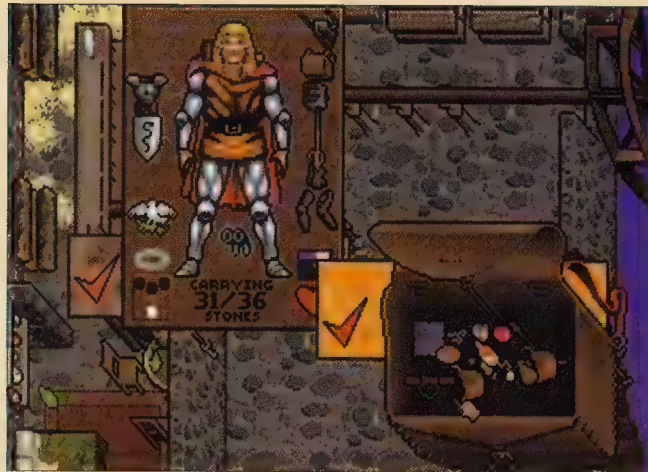
ORIGIN ORIGINALS

Ultima VII Part 2: The Serpent Isle (\$79.95) is the sequel to *Ultima VII: The Black Gate*. Eighteen months have passed since we saw action in *The Black Gate*, but you're still trapped in Britannia by the circumstances that concluded that game.

Although you should have scored a victory at that point, now a wave of terrible magical storms is sweeping the world, a strange sickness is spreading across the land, and the Fellowship is still at large. The solution to these problems lies on the legendary Serpent Isle. All you have to do is get there and balance the forces of order and chaos.

In addition to continuing the *Ultima VII* story line, Part 2 has its own enhancements. You'll explore a newly discovered region of Britannia. Graphics highlights include a close-up portrait of every character you meet and a detailed, full-length view of your character equipped with the armor, items, and weapons you choose. You also get digitized speech and a complete musical score to boot.

Ultima VII adventurers can now take a productive side trip, but still continue their quest to solve the mystery of the Black Gate. **Forge of Virtue** is an add-on disk that sends *Ultima*



Ultima VII gives you a close-up portrait of every character.

VII players on three new quests that can max out their characters' attributes and earn them a powerful new weapon.

You can access *Forge of Virtue* at any point during *Ultima VII* or Part 2. Once players complete one or more quests, they can return to the point at which they left the original game and use their newly earned powers to solve it.

In the works at Origin (Austin, TX) are **Ultima Underworld II** and **Wing Commander III**, which will use the Strike Commander engine. Details originate at (512) 328-5490. — W.N.

PUZZLES AND MORE BY SSI

SSI (Sunnyvale, CA) has a prophecy. It's **Prophecy**



The Summoning offers over 100 hours of game play.

of the Shadow (\$59.95), a single-character adventure in which a dreaded prediction has come to pass. Now evil will be unleashed upon the world unless you complete your mission. You'll be confronted by an array of bewildering puzzles in a deadly wilderness, creepy catacombs, eerie castles, and danger-filled dungeons.

Players can choose three viewpoints: an adventure view for combat, a face-to-face view for conversing with other characters, and, through the use of magic, an eagle's view of the world.

The game features a simple point-and-click interface with icon-based commands and graphics-based inventories. The 256-color VGA graphics feature slick animation sequences and digitized art of characters in full costume.

The Summoning (\$59.95) is a fantasy role-playing adventure that's designed to offer more than 100 hours of game play. You must find your way through a twisting labyrinth to evil Shadow Weaver's citadel. To prevent the Shadow Empire from conquering the land, you must discover a magical artifact and then cast the spell of the Summoning.

This adventure features automapping, a point-and-click interface, icon-based inventories, 256-color VGA graphics, and more.

Based on the war in the Middle East, **A Line in the Sand** (\$39.95) is a multi-player game based on the board game of the same name. The game features six scenarios — two based on the Iraqi War and four based on hypothetical scenarios. Each scenario has its own objectives, optional rules, and weapons, and allows up to six players to represent different countries.

Cyber Empires (\$49.95) is designed to combine strategy and arcade action. You maneuver your armies around the world and build factories to create cybernetic empires. Up to five people can play in one of three modes: strategy, arcade, or combination.

In **Spelljammer** (\$59.95), you leave the Forgotten Realms to venture into outer space as captain of the Spelljammer spaceship. You discover quickly that the evil Neogi have been roaming Realmspace and now pose a serious threat. Your mission is to destroy the Neogi's main ship and defend your ship from other vessels, pirates, mutinous crews, and wild space monsters.

For more information, contact SSI at (408) 737-6800. — W.N./D.M.

SIERRA'S QUEST FOR GLORY

Fantasy role-playing stalwarts who cut their teeth on the Hero's Quest series by Sierra On-Line (Oakhurst, CA) will be glad to know that the challenging-but-lighthearted spirit of adventure, and the time-honored humor have been



Venture into outer space in Spelljammer.

retooled for the Quest for Glory Series. **Quest for Glory I: So You Want to Be a Hero** stars you as a graduate of the Famous Adventurers Correspondence School. You custom-design your characters — fighter, magic user, or thief — uncover spells, master weapons, and battle savage monsters.

Quest for Glory I will feature more than 40 clay-modeled monsters and talking heads. According to a representative at Sierra On-Line, "five pounds of clay and more than six hours of sculpting time" were devoted to each six-inch figurine displayed in the game.

Impatient Questers will appreciate the new notyping, point-and-click interface. At any point, dialog boxes let players probe up to seven levels in any conversation.

Quest for Glory III: The Wages of War is on the way this fall. What about Quest for Glory II, you ask? Direct all Quest-ions to Sierra On-Line at (206) 683-4468. — W.N.

THIS GAME IS MURDER

Going on an ocean cruise can be murder — and not just if you're prone to seasickness. **Cruise for a Corpse** (\$54.95) by U.S. Gold (San Jose, CA) is an interactive murder mystery designed by Delphine Software. As inspector Raoul Dusentier you've been invited on a dream cruise in the Mediterranean, but no sooner do you embark when you're summoned to investigate a scandalous crime — the murder of your host. You interrogate other characters and eavesdrop on suspects to ferret out valuable clues. This intriguing story follows the spirit of Agatha Christie mystery novels. Who dunnit? Contact U.S. Gold at (408) 246-6607. — W.N.

INVESTIGATE ICOM

ICOM Simulations (Wheeling, IL) has been doing other people's work for years. It doesn't usually publish its games itself; the

company has several PC projects in the works, though.

The GGA Tour is a golf game, but you've never seen holes like these outside *National Geographic*. This is fantasy golf to the *n*th degree, because you tee up on 18 fantasy holes all over the world. For example, there's a monster par 5 atop Mt. Everest in Nepal. You get bonus holes, caddies, and a wisecracking commentator who cuts you no slack.

Beyond Shadowgate will be an interactive CD-ROM-based game. It's the sequel to Shadowgate (also developed by ICOM) — another first-person-perspective haunted-house thriller. Players can move to any location in the house, freeze action, investigate objects, and continue their quest.

— W.N.

UNCLE MILTIE GOES HI-TECH

You've got your fancy flight simulators and your radical role-playing games, but no software library is complete without a copy of **Milton Berle's Private Joke File** (\$29.95).

The Comedy Software (Beverly Hills, CA) compendium offers more than 10,000 jokes, stories, one-liners, and heckler stoppers. The database uses Nantucket Corp's Clipper application and development system and lets you search any category; tag single or multiple jokes, then print them or integrate them into a word-processing document.

Milton Berle's Private Joke file also includes a

"Tricks of the Trade" section that's designed to help anyone stand up in public and deliver jokes and other comedy material. After all, as the expression goes, "Dying is easy, comedy is hard."

Miltie is only the beginning. At press time Comedy Software was negotiating with other famous comedians for future releases. For more information on Milton Berle's Private Joke File, call 1-800-MILTIE B. (I'm serious.) — D.M.

FIRST IMPRESSIONS

Impressions (Farmington, CT), a European producer that has set up shop recently in the States, has four new games that have been released or soon will be: **Air Force Commander**, **Discover — In the Steps of Columbus**, and **Conquest of Japan**. All carry a retail price of \$59.95.

Air Force Commander is an air-warfare simulation. You send squadrons on missions either to defend your cities and bases, or to eliminate the enemy's offensive capability. Just as important as your military strategy is your ability to manage resources such as fuels, arms, water, and power.

Columbus discovered America 500 years ago. Now it's your turn. In **Discovery — In the Steps of Columbus**, you play the role of the famous explorer. Search for new worlds, avoid pirates when you can, and fight them when you must. You'll conquer the "new world."

In **Conquest of Japan**, you start out with five cities.



Milton Berle's Private Joke File: stories, one-liners, and more.

Each city generates income with which you can buy armies. You must decide what type of soldier you want. After you've assembled your army, you decide how you want to deploy it.

You can, for example, have one large army or several smaller units. Next, you plan your campaign. Are you content to defend your cities or do you want to attack the enemy's cities?

SOFTWARE FOR \$9.95

Sierra has released the first five packages in its **CRAZY NICK'S PICKS** line of special-value software. The products, which carry a suggested retail price of just \$9.95, feature well-known Sierra characters in new settings.

- **ROGER WILCO SPACED-OUT GAME PACK:** From the galaxy of Space Quest adventures comes Skimmer Ride, Monolith Burger, and the Scumsoft exclusive Ms. Astro Chicken.

- **LEISURE SUIT LARRY'S CASINO:** Take a break from the typical Larry pastime of chasing babes, and try your hand at poker, blackjack, or slots.

- **ROBIN HOOD'S GAMES OF SKILL AND CHANCE:** Test your wit and reflexes at archery, sticks, and the medieval strategy game of Nine Men's Morris.

- **PARLOR GAMES WITH LAURA BOW:** The sleuth from the Laura Bow Mystery Series hosts a sampling of games from the Hoyle Series, including Yacht and Dominoes.

- **KING GRAHAM BOARD GAME CHALLENGE:** Take on the king of Daventry in checkers and backgammon.

Each Nick's Picks package includes one 3.5-inch low-density disk. The games support EGA, VGA graphics and major sound cards. The games' minimum requirements are a 286-based system and at least 640K of RAM.

— D.M.

Whatever you decide, expect to encounter another army. The game then generates a landscape based on the terrain on which the two meet. You zoom in on the battlefield, choose your army's formation, then watch the animation as your army gets into place. Once in position, the battle begins.

You can choose to watch the action, or control your entire army, a subgroup, or even one soldier. You can play **Conquest of Japan** in one-person, two-person, or computer-versus-computer mode.

Impression, in conjunction with Omnitrend Software, will also release **Paladin 2**, a sequel to the popular fantasy role-playing game **Paladin**. According to a company representative, **Paladin** features a better interface and improved graphics images. The game includes 20 scenarios and a scenario builder. A separate scenario disk will be available later this fall. For more information, contact Impressions at (203) 676-9002. — D.M.

DYNAMIX DOES FOOTBALL

Dynamix/Sierra (Coarsegold, CA), the company that bought you great simulations such as **Red Baron** and **Aces of the Pacific**, is moving from the sky to the gridiron with its release of **Front Page Sports: Football** (\$69.95).

Front Page Sports: Football features more than 8000 frames of animation, music, sound effects, and digitized speech. You can

Pilot 42,000 tons of steel with big guns blazing!

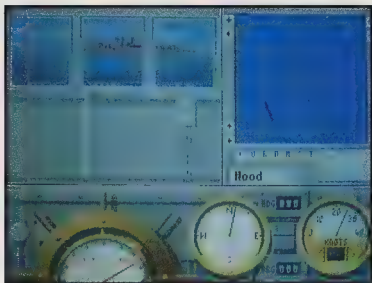
When you want an advanced simulator with *real* power, play **GREAT NAVAL BATTLES™**: NORTH ATLANTIC 1939-43. Its state-of-the-art graphics and animation put you on the bridge of the great German or British battleships and cruisers of World War II.



Choose the **CAPTAIN'S VIEW** and steer majestic ships like the *HMS Hood*; go to full power and watch the action



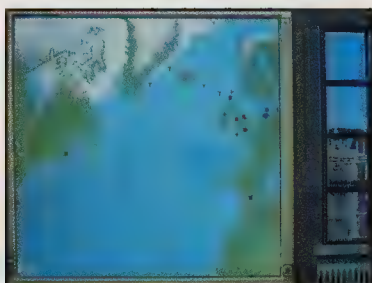
on the screen as 42,000 tons of steel respond to your command. Listen as dramatic sound effects re-create the roar of guns as you fire them. Watch the shells splash in the distance or explode on target. See the flash of enemy guns and feel your ship vibrate as she's hit. Take command even through the toughest North Atlantic storms!



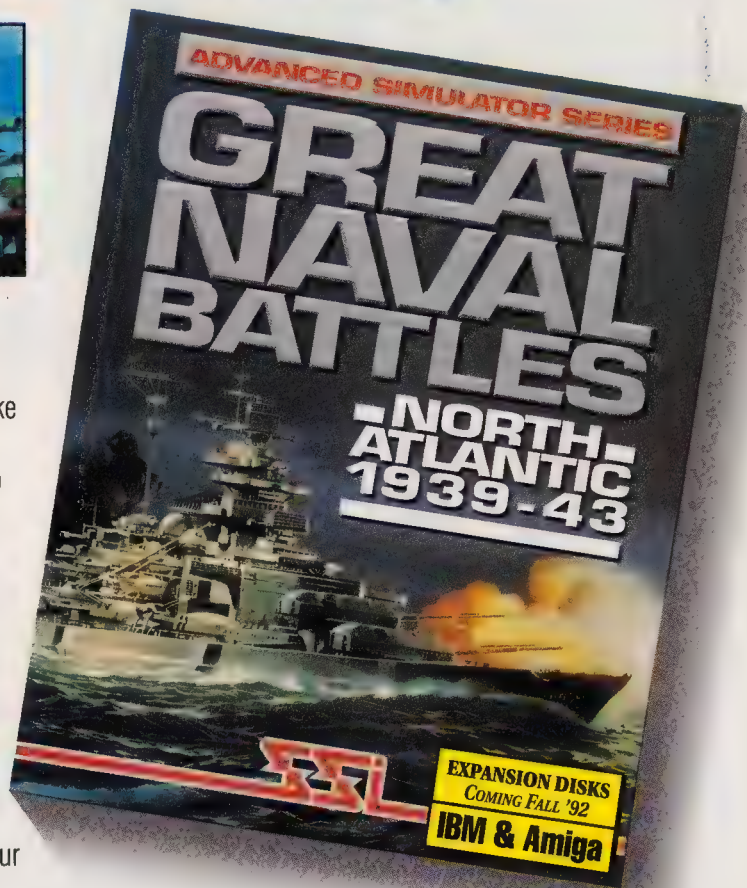
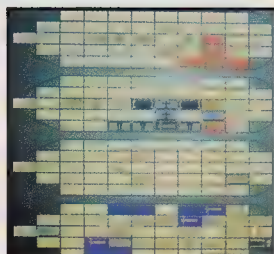
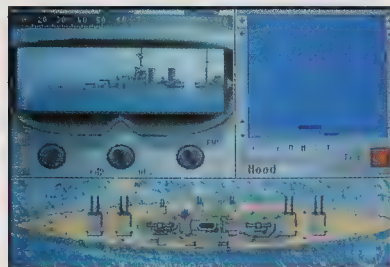
You can also watch the action from

the **FLEET VIEW**, an eagle's-eye look of the individual ships of a task force, or the **GRAND ADMIRAL VIEW**, a strategic display of your entire navy and all visible enemy vessels on a map of the North Atlantic.

Fight the entire campaign, mini-campaigns or individual battles as the British navy seeks to protect



her transport ships from German predators. All the action happens in real time or you can compress the scale. There's even an instant replay feature.



This advanced simulator also boasts the dedicated attention to historical accuracy and detail for which SSI is renowned: extensive online ship data and specifications; detailed damage report by deck; even stunning cinematics to heighten the historical drama.

GREAT NAVAL BATTLES.
Awesome simulator.
Incredible simulation.

TO ORDER: Visit your retailer or call 1-800-245-4525 (in USA & Canada) with VISA or MC.

To receive SSI's complete product catalog, send \$1.00 to: **SSI**, 675 Almanor Ave., Suite 201, Sunnyvale, CA 94086.

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Detail and realism abound in Front Page Football.

also design your own plays or modify any of the 200 stock plays. You can play the game on three levels:

quarterback, coach, or general manager.

Front Page Football also adds a sense of realism.

According to a Dynamix representative, if you're the home team in Seattle, for example, you'll benefit from the noisy fans. If you're in Green Bay, you might encounter snow. The game also accounts for natural grass versus artificial turf.

For more information, contact Dynamix/Sierra at (408) 683-4468. — D.M.

PLAY GENERAL MANAGER

Savvy football fans know that games are won and lost in the front office as much as they are on the field. A

good team begins with a good draft. In **GM Football** (\$39.95) from Mahoney Software Products (Newport News, VA), you scout, draft, and sign hot college prospects.

After you've built your team, GM Football is designed to be easy to learn and play, but difficult to master. It doesn't feature the spiffy graphics of many of today's football games, but it does let you build your team through the college draft.

For more information, contact Mahoney Software Products at (804) 591-7225. — D.M.

A GAMING PRODIGY

To address what it describes as "a sizable and vigorous [game playing] population on Prodigy," the on-line service announces the **PRODIGY GAME CENTER**, with an array of existing and new games as well as the following services: daily news, reviews, and features for PC game players; a hints database for leading adventure, role-playing, strategy, and simulation games; a weekly game poll for members to express their opinions about games; a bulletin board devoted exclusively to games; a direct link to leading game publishers via the Software Connection; shareware games; and access to all Prodigy games.

Featured titles currently included in the Prodigy Game Center are **REBEL SPACE**, **PRODIGY NETWORK GOLF TOUR**, and **PRODIGY MYSTERY PARTY**.

Rebel Space is a 50-player game of galactic exploration, conquest, and colonization. You take the role of an explorer; your mission is to open up new regions of the galaxy. You're equipped with four spaceships with which you must claim planets, build defenses against marauders, educate societies from the Stone Age through faster-than-light time travel, and more. As the adventure progresses, players form opposing alliances and engage in ship-to-ship and interplanetary combat. When your turn comes up, you must enter ship navigation instructions, ship modification orders, and political instructions. You receive results via electronic mail. A 25-turn game is \$24.95.

Prodigy Network Golf Tour combines Prodigy's on-line and multiplayer capabilities with Accolade's Jack Nicklaus Golf & Design/Signature Edition. Every month the tour travels to a new course, which you download through Prodigy. You can select the type of tournament you want to play — "opens" let you include up to 150 players, while "invitationals" let you play with only four to 32 players. Each tournament has its own

rules, which include number of rounds, scoring method, date each round is due, and so on. The details are managed by the Prodigy custom-tournament system. You download your "ticket" for each round and play them off line. When you finish a round, you upload the results to Prodigy. You can view a play-by-play replay against your competitors, the updated leader board, the key statistics in the tournament, and whether or not you have qualified to move to the next round. A special bulletin-board system serves as the on-line clubhouse where you can visit with other players or ask questions of the Prodigy Tournament Director. Access to the tour costs \$7.95 a month.

Prodigy Mystery Party is based on the Abel Adventure series. In the Mystery Party, you play the role of a character in a multiplayer mystery game. Each game lasts a month and progresses in real time. All on-line players participate in the same game. Each player is part of a team of characters. The first story takes place on a cruise ship in the Orient. At some point on the cruise, a murder is committed (surprise). You, and every other player, discover that you have at least two of the three elements to arouse suspicion among other players: motive, means, and opportunity. The goal is to discover whodunnit. Each day you have access to the "public" story as well as your own "private" story. Actions are based on decisions the team makes as a group. For example, who should you sit with at dinner? Should your team investigate the storeroom when everyone else is on deck? You and your team can play your moves in the bulletin-board area.

According to a representative at Prodigy, new games will be offered several times a year. Pricing details were not available at press time. For more information on the Prodigy Game Center, call 1-800-PRODIGY. — D.M.

You stumbled back to your office after a long day of detective work. But before you can get cozy with a whiskey bottle, there's a message waiting on the phone machine.

"This is a life and death emergency!! Young ladies have been disappearing left and right, and now, Donna is missing!! We need your help!!

Please come quickly!!!

Donna's rescue is only the beginning of this sizzling adventure. There's dozens more tantalizing women held against their will. Free them from the evil clutches of General Kaiser, Cobra's psychotic master criminal overlord, and they will thank you in ways that will leave you screaming in ecstasy.

You'll be dazzled by the quality of the full screen ANIMATION graphics and find yourself reacting physically and emotionally to them! It's AWESOME!!

Megatech is offering Cobra Mission for an introductory price of **\$49.95** (regularly \$79.95) plus \$5.00 shipping and handling.

CA residents add 8.25% sales tax.

To order, call 800-258-MEGA and use your VISA or Mastercard. Or send check or money order to MEGATECH, P.O. BOX 11333, TORRANCE, CA 90501

System

requirements:

286 or faster machine
with 640K RAM;
hard disk with min.

12 megabytes of available space required, mouse recommended. Graphics compatible with EGA, MCGA and VGA (VGA highly recommended).

Sound support: Sound Blaster Pro, Adlib Gold

Companies and products mentioned are registered trademarks of their respective holder.

R

RATED R (This program is voluntarily rated due to the partially violent and adult nature of the graphic imagery.)
This program is intended for mature audiences only!!! No sales to minor under 18 and where prohibited by law

MEGATECH

TOP GUN

PUSHING THE ENVELOPE

By Cameron Crotty

Flight simulators up the ante — driving hardware and graphics technology to the limit and beyond.

Social psychologists call it “keeping up with the Joneses.” The sales force calls it “pushing the envelope of available technology to maintain market positioning.” Pallid programmers call it “Wow! Look what I can do!”

We call it *graphics technology*. Leaps in desktop power may have turned the PC market into a ragged bazaar of fluid pricing and instant obsolescence, but flight simulators have kept pace, sometimes even driven the market, by demanding more from the hardware than any other software. As soon as faster and more-powerful chips appear, developers load them down with even more brutally complex equations and cooler graphics. Let's take a quick look at where flight-simulator graphics technology has been, where it is, and where it's going.

Objets d'Art

When flight simulators were first developed, no one expected them to be realistic — personal

computers couldn't offer the processing power required. Aircraft and scenery were wire-frame constructions, the controls were simplistic, and you either liked it or you didn't.

Polygon modeling was one of the earliest graphics technologies used in flight-simulator development, and remains one of the most popular. Developers begin by creating a 3D world controlled by coordinates, then build objects out of flat, many-sided planes. The finished objects can be easily rotated, resized, or moved because they exist not as still images, but as formulae the computer can manipulate quickly. Until recently, the only major improvement has been to increase the number of polygons, something that loads down the processor and slows down the animation frame rate.

Although the blocky models aren't much to look at, they allow for some of the most realistic flight simulation around. Without fancy painted graphics, programmers can concentrate brain- and CPU-power on complex and accurate flight equations and dynamics.

Bit-Map Attack

Origin's *Wing Commander* re-defined the world of flight simulation. Designer Chris Roberts' approach was to create intricate 3D models

with high-end rendering software, then “photograph” them electronically from several angles. The resulting images, called *bit maps* or *sprites*, were then stored for later use. The simulator engine calculates the viewing angle, then paints the appropriate bit map on screen.

The technique makes for some stunning visuals, but it has its drawbacks. Since you're viewing a series of snapshots instead of constantly re-calculated objects, when that German Me-262 goes into a barrel roll in front of you, the plane may seem to “click” from view to view, especially at close range.

But bit maps expand the graphics possibilities, especially by increasing the number of visual-distance cues. When a polygon object is in the distance, it's difficult to tell exactly how far off it is and how fast it's moving — there are no details on the surface of the object that become larger as it gets closer. Using bit maps with a technique called *sprite scaling*, programmers can offer far more visual-distance cues than is possible with polygons, without chewing up processor cycles and slowing down the simulator.

Instead of taking extreme close-up snapshots of an object, the programmer moves the “camera” back to the middle distance. As

you get closer to the object, the software simply enlarges the existing pixels, creating a jagged, zoom-mode effect. The theory is that when you're up close and personal, you don't need fine visual-reference points.

What's Next

As always, the struggle in the flight-simulator industry is over who's going to make the next breakthrough and what that's going to be. More than just the next flight sim hangs in the balance, for such technology has a habit of finding its way into other simulations or games.

Origin may have unwittingly sealed the fate of its as-yet-unreleased *Strike Commander* by showing a demo at the Consumer Electronics Show more than a year ago. The unbelievable graphics sent a shock wave through the flight-sim development community, because it was rumored that Roberts had found a way to wrap bit-mapped graphics around 3D polygons without taking a hit in system speed. Developers came away from the show thinking, “We've got to have something that can match that.”

From Dynamix, the answer for now is *Aces of the Pacific*, which employs the proprietary *3Space* system. 3Space is still polygon based, but Dynamix has done some amazing

things in coloring those polygons, and even in using some as decals to embellish aircraft. Rumors are afloat that the folks at Dynamix are inches away from completing their own version of a bit-map wrap for its polygon planes, but so far, their lips are sealed.

On Assignment

Microprose is equally tight-lipped about the technology in its under-construction **F-15 Strike Eagle III**, but a trip to the company's Maryland plant turned up a few interesting details.

While the plane you're flying is still a polygon beast, and you're still flying over a 3D world, it's a world to which liberal strokes of detail, contour, and texture

have been added. Andy Hollis, head of the Simulation Group, was quick to emphasize that these aren't *texture-mapped polygons* (a process in which textured surfaces are mapped onto polygon constructs and then rendered, usually at a very slow speed). When pressed, Hollis admitted to using a variation on sprite scaling with a dash of fractal terrain generation thrown in, but then the whooping security lights went off, and he had to quickly disarm the "He Knows Too Much" bomb they had strapped around my neck when I walked into the place.

Close-mouthed developers are never so infuriating as when they're doing something interesting. I was

impressed with Strike Eagle III. For the first time in a polygon-based simulator, I felt as if I were really hedge-hopping at 100 feet. Instead of appearing dithered or dotted, the terrain looked coarse; it was easy to tell how close I was to surfaces or objects that had been treated in this fashion. And then we hit the clouds.

In other simulators, clouds are represented as huge, gray blobs with strange, straight edges. Not so in Microprose's world. Like the terrain, clouds had wonderful ragged edges that from a distance almost looked like a painting. As I closed on a cloud, I could catch glimpses of blue sky through jaggy white wisps. (Sprite scaling, I thought.

Gotcha, Andy.) The vista went from sky blue at the top of the screen, through hazy white. Then I could see the ground far below, partially obscured by the translucent cloud I was flying through. Fantastic.

Fly Away

Most flight-sim developers are playing their new breakthroughs close to the chest, but considering the competition, that's not surprising. It'll be interesting to find out someday exactly what Microprose, Dynamix, and other companies are doing, but until then, I don't care if they're shipping flight-sim upgrades featuring elves with funny hats waving wands and muttering incantations. I'll fly it anyway. □

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Requires VGA graphics, 640K and a Hard Drive
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ROLE CALL

DON'T BUG ME

*Your toughest enemy
is an insect, not a
sword-wielding demon.*

By Bernie Yee

You've defeated hoards of monsters, demons, and dragons. You've learned to two-step beholders and cope with real-time combat. Some of you have even learned to coax software into giving you unfair advantages over your opponents.

But the toughest enemy is one over which you have no control. All your spells, your magic weapons, your combat-toughened savvy aren't enough to knock out the ultimate opponent: the software bug.

Because of their size, their complexity, and their constantly changing characters, plots, and environments, role-playing games are among the most afflicted.

To put it plainly, I've not seen a single role-playing game of any worth that didn't bundle bugs along with the game. I'm not talking about trivialities, here, but about serious bugs that can impede your progress or even prevent you from completing the game successfully. Included in this "role" call of error are missing clues, disappearing objects, and the *return-to-C:>-prompt* crash.

Might & Magic III, Ultima VII, Magic Candle II, Ultima Underworld — the list of such RPGs goes on. When will it stop?

Bug Breeders

Because its games are the most technologically advanced of the lot, it's no surprise that Origin is one of the worst bug breeding grounds. Ultima Underworld, for example, included a major bug that made items vanish from your inventory. That's pretty ghastly, especially when you're carrying around the various artifacts you need to complete the game. A patch was made available via on-line services such as CompuServe, GENie, and America Online to help solve the problem.

To get the patch, though, you need a modem, some telecommunications software, and some bucks to pay the connect charges. You could send away for a patch disk, but the wait runs contrary to most role-playing gamers who, like everyone else, want it right now.

Ultima VII also suffers from a disappearing-object bug, but the resulting patch addresses only vanishing keys. What's particularly distressing about Ultima VII is that the game already requires a bare-bones setup on your PC — HIMEM.SYS, a mouse driver, and a disk cache — and so could be expected to sidestep most compatibility problems.

Even games nowhere near state-of-the-art are overrun by bugs. Magic Candle II is by no means a graphics and sound extravaganza. It broke no new ground in role-playing technology, but sought to provide a consistent game interface and an interesting story. Yet Magic Candle II had, among others, text bugs that prevented gamers from receiving critical clues. In fact, Magic Candle II has had three major and several minor revisions. The only good news is that the final update implements a mouse interface.

What's the Deal?

The single role-playing line that's remained relatively bug free (or so it seems) is SSI's Advanced Dungeons & Dragons series. There's a reason. Not only has the Gold Box series' game engine been around for years — more than enough time to squash all the major bugs — but that engine is barbarously primitive, designed originally to run on 8-bit computers.

Simply put, the more complex the software, the more it's prone to bugs. But SSI hasn't escaped unscathed. Its role-playing games, especially the aforementioned Gold Box line, has been plagued frequently with typographical errors, incredibly annoying mistakes that, if nothing else, reveal weak testing.

What's the deal? Why is this happening? Many bugs are beyond programmers' reach because of the platform itself. IBM PC clones operate with so many differing BIOSes, graphics standards, memory managers, sound cards, and even operating systems, that ensuring compatibility is a Herculean task.

PC hardware technology has grown by leaps and bounds, and programmers haven't had time to understand all its kinks. (Microsoft needed to run Windows all the way to 3.0 to even begin to approach a properly running environment.)

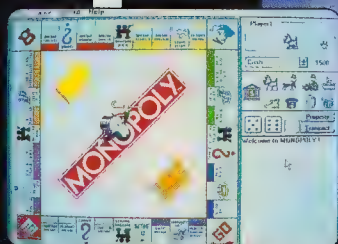
A contributing factor may be "blockbuster syndrome," which is when game publishers rely on one particular title (or at best, a series). With so many resources riding on a single game, there's tremendous financial pressure to release a program sometimes long before it's technically ready.

My recommendation for the bug-wary? Wait and let others serve as paid testers. But if you just can't postpone buying the newest game, subscribe to an on-line service to keep an eye out for bug reports. These services also give you access to fixes as soon as they're available.

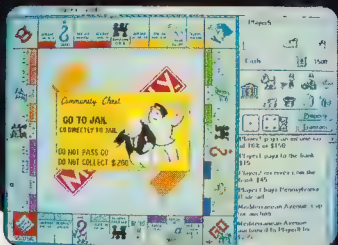
When will role-playing games be bug free? Whip out your +4 fly swatter and follow me — maybe someday we'll find out. □

Trade Up!

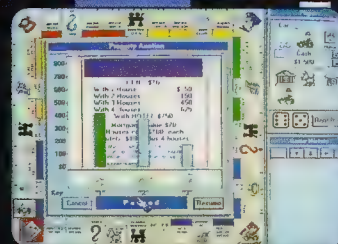
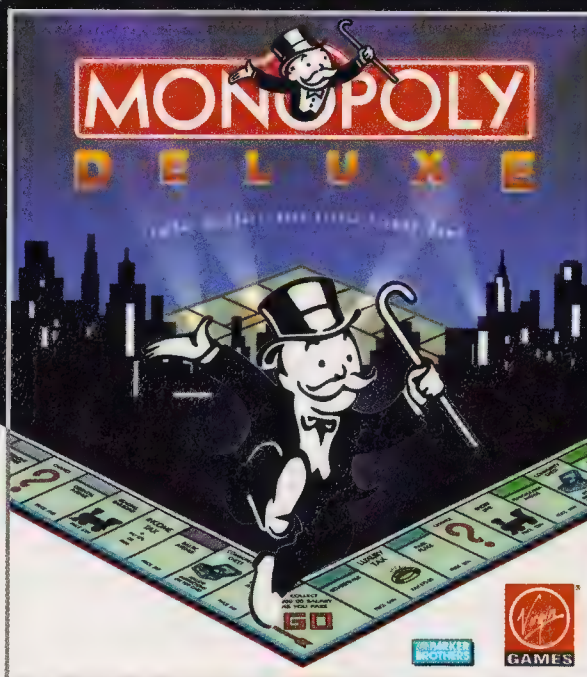
The Game You Grew Up With Has Grown Up Too!



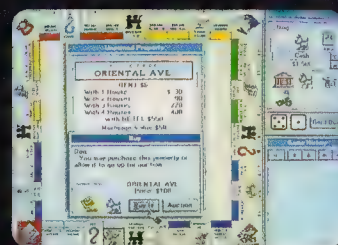
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SPORTS PAGE

WHAT'S IN A NAME?

Sports celebrities may hustle PC games faster than they hustle down the court, but do their names make a difference?

By Wayne Kawamoto

Basketball great Dr. J brazenly cannibalized his name to "Dr. Chapstick" to please the gods of product promotion. Pennzoil wants us to believe that Arnold Palmer rides around on an old lawn mower in his free time. Jockey wants us to imitate Jim Palmer, one of the few men with the guts to pose shamelessly in briefs.

From fast foods to clothing to pain killers, sports celebrities endorse just about anything, including software. Although you're not going to see Larry Holmes pushing the latest spreadsheet, many games use sports figures as their themes.

But does a celebrity's name on a title mean that the game is any better than a no-name program? Does the celebrity contribute some expertise to the game? According to Accolade's Daniel Jeung, a sports celebrity "gives a game credibility and instant familiarity."

That's easy to see. Browse through your favorite software store and consider two titles: "Big Name Golf" and "Golf." Which would you buy? Chances are you'd go

with the big name if it had comparable graphics and features. Familiarity and credibility — that's what a name sells in sports software. And those were key concerns with UbiSoft's **Pro Tennis Tour II** — now **Jimmy Connors Pro Tennis Tour**.

Some years ago, Pro Tennis Tour was a successful hit in Europe. But U.S. sales were disappointing — in fact, it was a downright flop despite fairly positive reviews. When the sequel, Pro Tennis Tour II, was complete, UbiSoft felt it had a winner, but it didn't want the product to follow a flop — thus, a name change.

The Connors tie-in gave the sequel new life in the U.S. As UbiSoft's Leila Emadin says: It's been "nice having him on our side ... a living-legend pro with a worldwide name to help sell the product."

But a player's image and reputation also are important. According to Data East's Sangita Verna, "a sports figure helps sell a game, but it's more than having a good player. For example, Jose Conseco is a good player, but kids won't buy a game with his name on it because he's a jerk." But they *will* buy Data East's **Bo Jackson Baseball** because Bo is "cool — a nice guy off the field," says Verna.

Cutting the Code

According to Eddie Dom-brower of Mirage Graphics,

creators of **Earl Weaver Baseball II**, a sports star's name also can shape a product's design. Designers at Mirage spent considerable time meeting with the man and reading his books, so that they could incorporate Weaver's managing philosophy into the game. The designers strove to create a virtual Earl, a software manager that could call the plays, select relief pitchers, and create starting lineups just as Weaver would.

Accolade's **Jack Nicklaus Signature Golf** was influenced heavily by Nicklaus and his organization. Nicklaus is a widely known course architect, so the game logically emphasizes his philosophy and approach. The Nicklaus organization took pains to lay out its courses' terrain by helicopter and to check each of the game's courses for accuracy. The Nicklaus organization also called for realistic ball flight and 360-degree background views. According to Accolade's Jeung, "in the end, the game was heavily scrutinized by the organization."

When he wasn't announcing games, pushing hardware stores, and riding on trains, John Madden helped develop his second namesake game for Electronic Arts. Designers were given Madden's own Oakland Raiders playbook and provided with guidance on the game's 80 offensive and

defensive plays. The software's artificial intelligence was modeled on Madden's own play-calling formulas.

During development of SSI's **Tony La Russa Ultimate Baseball**, designer Don Daglow recalls numerous visits to the Oakland Coliseum for lengthy meetings with the manager. There, Daglow showed La Russa code, awaited feedback, and then returned to his programming.

"We'd get oral input from him," says Daglow, "then fine-tune and make sure things were right." La Russa influenced how defenses were set, when to call steals, how to hit and run, and how to set the lineup.

So does that athlete's name on the box make the product a superior sports game? Who knows? Your guess is as good as mine. For every game that incorporates a sports legend's expertise, there's another that the celebrity barely knows exists.

Just remember that the game's fun quotient is far more important than a name. The world's biggest sports name can't turn a dog into a dream.

Here's waiting for Bob Uecker Baseball, Pee Wee Herman Power Football, and Weight Training with George Foreman. Don't laugh — it's not impossible. Not in the world of software celebrities. □

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YOU ARE THERE

BY THE NUMBERS

The PC's penchant for math numbs the mind and leaves us thinking of the mechanics, not the magic, of games.

By Peter Olafson

Computers don't know much about history or the French I took, but they sure are demons at arithmetic. Math is their first and best gift — the task for which they were designed — and it's understandable that when PCs begin to exhale heavily in pursuit of a job for which they weren't intended (playing games), numbers weigh in heavily.

Descend through the fabric of even the most literate and interactive game, and you'll find a reservoir of algorithms, timers, triggers, odds makers, and numeric tables. It's okay; they live here. We're the strangers.

And yet, too often, numbers seep to the surface, as from some forgotten oil tank, to pollute the game proper. I play Mindscape's **The Global Dilemma: Guns or Butter** and learn that my opponent's military strength is .0029. I set out to defend Midway from the Japanese in SSI's **Carrier Strike**, and discover my task force is at *LOC: 51, 25*. I start a new character in **The Dark**

Queen of Krynn, and find Peteroo's dexterity is 16. (I mean, a drop-dead-gorgeous woman in an AD&D game wouldn't be a 10 in looks, she'd be an 18, with a beauty bonus.) I distribute food among my people in **Romance of the Three Kingdoms II**, and their loyalty rises to 68. Realistic, sure, but there's got to be a better way of putting it.

Under the Skin

This realization came home to roost during a recent bout with Koei's historical simulations. Koei's responsible for (among others) the above **Romance II**, **Nobunaga's Ambition**, **Bandit Kings of Ancient China**, and, more recently, **L'Empereur** and **Uncharted Waters**. These games are densely packed, absorbing, and frequently delightful exercises of the mind, a very nice turn on the old conquer-the-world game. They've cost me many productive hours already and undoubtedly will cost many more.

But they're also stat-based, the sort of games that could never have been conceived without a computer at their core. It's one thing to know you have 7000 men at arms, five generals, and 12,000 units of food in a given province. It's quite another to be told that the province's land cultivation is 56 and the

people's loyalty is 68. Handy for the computer, maybe, but not well grounded in the real world. And it's not very human. Much as I enjoy the games, I can't play them for more than a couple of hours before I begin to feel a bit numb. It's just too much like doing sums.

Numbers aren't where we come from. It's not the way we think naturally. And unless we're running the monthly poll on our mayoral performance in **SimCity**, it's not the sort of detail we typically relish. Human knowledge and intuition aren't so precise. Indeed, it's rather like playing the game on the computer's home turf, and a reminder that the skin dividing the game and the game engine is thinner than Ross Perot's.

Beyond that, numbers leave the impression less of a flowing and variable world than of a fixed "right answer" — a mathematical answer. They make you feel as if you're wandering through the sub-basement of a sprawling equation.

That may be exactly the case, only we're not supposed to see games that way. It bursts a game's escapist bubble to remind you of the mechanism.

We'll never do away with numbers, but we should be able to conceal them better. I'm calling for a more humanistic computer

game, a game that draws on our experiences as people — one that's more anecdotal and narrative in quality, more social than statistical.

Fudging the Figures

We don't need a human-relations co-processor in the PC to do it. VGA graphics images and stereo sound, well used, aren't just nice perks. They're one more rung down the ladder into immersion.

The mouse is just as powerful, and quite underestimated. Well used, it's already closer to virtual reality — reaching your arm into your computer — than I suspect anyone has realized yet.

A designer could represent a character's numeric stats in human terms. Perhaps that character with a dexterity of 16 was a star gymnast in school. If so, let's say so. The career-oriented character-creation scheme in Paragon's **Mega-Traveller** series is a nice step in this direction. And if you want to know how loyal the population is, well, maybe you should hang out in a local bar for a while to taste the citizens' opinions directly. It can be done. The anecdotal feedback in Spectrum HoloByte's **Crisis in the Kremlin** is a fine start.

We're human beings playing games. Those are computers helping us. Let's not get them mixed up. □

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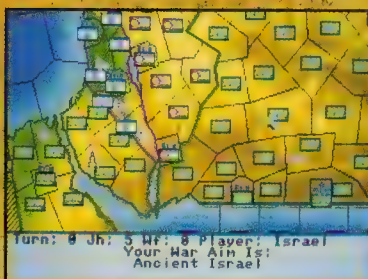
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A historical scenario showing Coalition Forces preparing to invade Iraq and liberate Kuwait



The diplomatic situation in the hypothetical "Holy War" scenario.



CHILD'S PLAY

DIGITAL BUILDING BLOCKS

Kids' software taps the promise and potential of interactive multimedia.

By Gregg Keizer

Multimedia. *Multimedia*. MULTIMEDIA! You've been living out on the Aleutians if you haven't heard about multimedia. How it's going to blow television out of the living room. How it's sexy, entertaining, educational, invaluable, necessary to the future of computing, maybe the world as we know it.

It's hype. In more ways than one, multimedia is a technology in search of a mission, a bunch of hardware touted as a solution to a problem that has yet to be defined. The only thing everyone in the business agrees on is that multimedia is a hot topic.

But what families think of it is harder to gauge. CD-ROM drives, a vital component of multimedia, hardly rate a blip on surveys of home-computer users.

All's not dark and depressing, though. There is a glimmer of hope for multimedia's proper place. And I'm betting that the glimmer will shine first, best, and brightest in games made for kids.

The elements of multimedia — integrated, high-quality music, images,

speech, and animation — seem tailor-made for children. Adults can get by with less when they have to, but kids' demands are more impressive. The only sure way to keep them interested is to make something as much fun as a three-ring circus, then hope they watch at least one ring's action.

Take TV. Kids sit through *Sesame Street* because the action, the jokes, the music, and the dialogue, go non-stop. Duplicate that on the PC and you have a better shot at grabbing their attention and holding it.

So what's multimedia going to do for kids? For one thing, it'll give us talking books. Broderbund's **Living Books** series — first in line is **Just Grandma and Me**, with **Arthur's Teacher Trouble** not far behind — is the current contender to bring colorful illustrations and crystal-clear speech to the PC. Such animated and conversational storybooks won't replace tales on paper, not with prices quadruple that of the most expensive kids' book, but they make a case for multimedia's worth.

Not only can kids read along with the computer, but they can have the computer read to them. Like a perfectly patient parent who can recite lines like the best actor, play the piano, sing, and make charade-like gestures all at the same time, talking books automate the storytelling

process. But the computer will never sit on the edge of your child's bed to tell a story before sleep. Instead, good multimedia-based talking books will serve as an adjunct to print-based literature — just as *Sesame Street* serves as a video adjunct to the type of learning that goes on continuously between parent and child.

TELL ME THE TRUTH

Another way multimedia can assure itself of a place at home is through reference works. Kids want answers to all kinds of questions, and parents don't always have a response off the top of their heads.

Encyclopedias and child-oriented reference materials find a welcome home for this very reason. Multimedia can fill part of the gap, too, with audio-enhanced, video-charged informational programs. Again, such on-screen references can't compete with paper (not yet), but their current shape bodes well for the future.

Already, kids can dig into titles such as **Science Adventure**, a floppy-based multimedia walk through bits and pieces of science knowledge. **Mammals**, an old CD from the National Geographic Society, is another example of a good start. When kids type *WHALE* and not only read and look at photographic-quality images, but also hear the

humpback sing and watch a pod of killer whales skim for sea lions, they'll have much, much more than just a PC-based *World Book*.

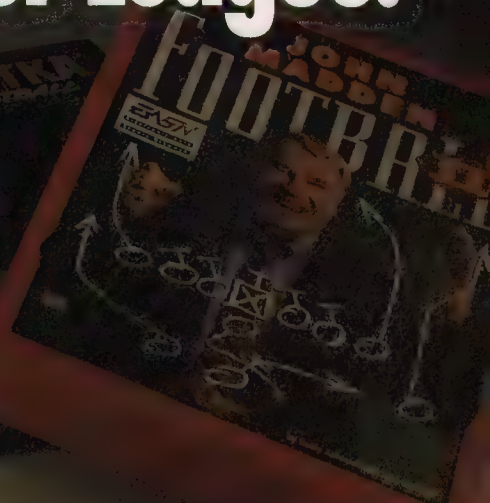
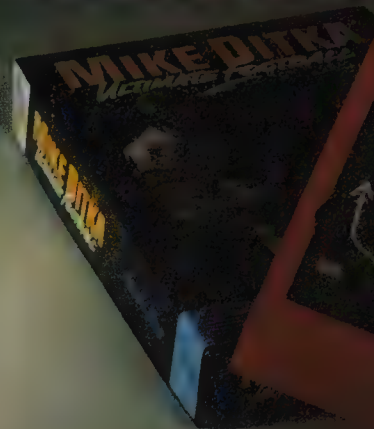
THEY WILL COME

But perhaps the kind of children's education (and entertainment) that fits multimedia best is the construction kit, a flexible, magical set of building blocks. Kids love to make things, to build model rockets, carve wood, mix chemicals, and generally mess around with reality. A multimedia-equipped PC could do that.

No, this isn't some virtual-reality daydream, but something that's possible now. **Operation Frog**, a veteran package that lets kids dissect a frog bloodlessly, is now on the Macintosh, complete with QuickTime video movies. What the PC needs is Operation Frog, and lots of more titles like it, to combine audio, video, and limited interaction for lots more subjects. What parent could turn down model rocketry, once the you'll-put-an-eye-out-with-that-thing danger is removed? Or refuse a multimedia chemistry set when there's no smell to permeate clothes and house?

Multimedia can make it on the PC. It just has to try harder. And the best place to win its early victories is in kids' software. They deserve it. □

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Completion %	75.0%	65.8/136
Passing Yds	248	21/54
Completion %	75.0%	65.8/136
Punting (No/Yds/AVG)	1/0/0	1/0/0
Fumbles (No/Lost)	0/0	1/0/0
Intercepted	0	1/0
Sacked	0	1/0
1st Downs	11	1/0
Net Yards	11	1/0
Touchdowns	0	1/0
Extra Points	0	1/0
Field Goals (No/Att)	0/0	1/0
Sacks	0	1/0
Penalties (No/Yds)	0/0	1/0
Total Stats	11	1/0
Total Plays	11	1/0
Total Time	11	1/0

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2	RB	Steve Watson	210 lbs	1/1/58	4 yrs
3	TE	Mike Ditka	245 lbs	1/1/58	4 yrs
4	WR	John Elway	185 lbs	1/1/58	4 yrs
5	WR	John Elway	185 lbs	1/1/58	4 yrs
6	WR	John Elway	185 lbs	1/1/58	4 yrs
7	WR	John Elway	185 lbs	1/1/58	4 yrs
8	WR	John Elway	185 lbs	1/1/58	4 yrs
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71	WR	John Elway	185 lbs	1/1/58	4 yrs
72	WR	John Elway	185 lbs	1/1/58	4 yrs

Team	W	L	T
SEAHAWKS	0	1	0
BEARS	7	1	0
BUCCANEERS	0	1	0
LIONS	7	1	0
EAGLES	0	1	0
GIANTS	1	1	0

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MULTIMEDIA MADNESS

MPC may mean CD-ROM, but you better know what you're getting.

By Barry Brenesal

Breathe *multimedia Windows* to a PC game player and it's like whispering *open sesame* to the vault of Ali Baba's 40 thieves — fantastic images of pleasure appear.

It's true that MPC, as Windows multimedia is usually called, isn't the only environment that combines hi-tech visuals, quality audio, and a CD-ROM drive for massive storage and fast seeks. But given laggard performance and the complete hardware refit required to own an **IBM PS/2 UltraMedia Model M57 SLC** (at a mere \$5995, it's a steal, right?), MPC will probably own the PC market by default.

Game conversions from floppy disk to CD increasingly sport the MPC label. Examples include Origin's **Wing Commander**, Virgin's **Spirit of Excalibur**, and Interplay's **BattleChess MPC**. The near-future forecast says that more titles — such as Broderbund's **Just Grandma and Me** — will be developed as original compact discs, as well. The computer gamer who wants to ride the CD wave should look to Microsoft Windows' rising

sun, and make sure his or her next (or first) CD-ROM drive is MPC compliant.

Other issues should be considered, as well — SCSI bus and an anti-dust, sealed-drive enclosure are just two. You can get by with a proprietary bus and a regular drive door, but you can't run games intended to harness the pure power of CD-ROM unless you have an MPC-compliant player.

A CD-ROM drive must meet two primary requirements to run MPC titles adequately: It can hog no more than 40 percent of the computer processor's power, and it must be capable of something called *continuous seek*. Think of the latter as a film projector running at a constant, very fast speed. Turn it on and off repeatedly and it slows down. Poor visuals, voices, and music result.

Although many CD-ROM drives use considerably less than 40 percent of the PC's microprocessor, not many can be accurately called continuous-seeking. Be wary of manufacturers that claim to run MPC-based software on their CD-ROM drives, but never mention continuous seek in the peripheral's specs.

Sure, the software will run, but not in any usable fashion. If your CD-ROM player is an underpowered film projector — one without continuous seek — your first CD gaming session

is going to be endless and possibly horrifying.

Keep an Eye Out

So much for scaring you to death. The up side is the unparalleled depth of visuals and sound you'll have at your disposal with an MPC-accessible CD-ROM player. To entice you into the purchase — not trivial when you're talking about something you'll use mostly for games — some manufacturers provide an incentive. They're so eager to boost player sales in today's competitive market that they may toss in some software and peripherals.

The most popular of these bundles is the \$699 **Sony Laser Library**, which features Sony's **CDU-7205**, an inexpensive, easy-to-install drive, and over \$1000 worth of CDs: **Mixed-Up Mother Goose**, **Compton's Family Encyclopedia**, **Languages of the World**, **Mammals: A Multimedia Encyclopedia**, **Microsoft Bookshelf**, and **Software Toolworks World Atlas**.

The kicker, unfortunately, is that Sony's CDU-7205 isn't MPC-compliant — yet. Like many of the better CD-ROM players, it will probably match the continuous-seek requirement in the near future. If you can wait for a player, keep an eye on the Laser Library.

One bundled deal that does run MPC is NEC Technologies' **Intersect**

CDR-74. It includes the **NEC CD Gallery**, which sports **BattleChess MPC**, **Grolier's Encyclopedia**, **Software Toolworks World Atlas**, **Time Table of History**, **Time Magazine Almanac**, **National Geographic Mammals**, and **Great Cities of the World**. A pair of small Labtec speakers (rated at 3.5 watts each) and headphones also come in the box. The CDR-74 retails for \$675, while the bundled package goes for slightly over \$1100 (but you can typically find the latter selling in the \$750 range).

Even NEC's deal carries a caution, though. In late 1991, the company upgraded its non-MPC CDR-73 player to multimedia status (CDR-73M). That unit barely cleared the docks before NEC offered the CDR-74, with its anti-dust enclosure. CDR-73M owners were not only left with a new but still outmoded product, they were also ineligible for NEC's CD Gallery deal — it's targeted at the CDR-74's potential market. Sure, the deal is great. But you've got to wonder about a company that makes a product obsolete almost as soon as it's purchased.

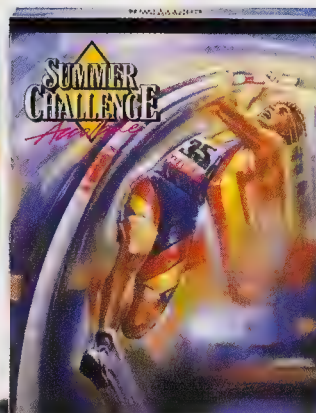
Even so, this is the CD-ROM deal of the day. With an NEC CDR-74 and its CD Gallery in your system, you're ready for the future of gaming. Just say *open sesame*. □



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They'll blow you away — three-dimensional worlds and rich plot lines make today's state-of-the-art RPGs a whole new experience.

Gore, gold, and glory — that's the stuff of which fantasy role-playing games are made. The latest computer role-playing games up the ante on all three counts, and come yet another step closer to letting you taste that metallic bitterness, feel a money-belt's weight, and bask in the little people's adulation.

No longer are you limited to cavernous settings deep underground — now you have whole towns and entire continents to explore. Worlds are richly detailed and full of interesting and dangerous non-player characters. More and more, role-playing games come nearer to attaining the rank of simulation, because they feature three-dimensional environments and fully realized worlds, not the

cardboard-cutout characters and sit-com story lines of the past.

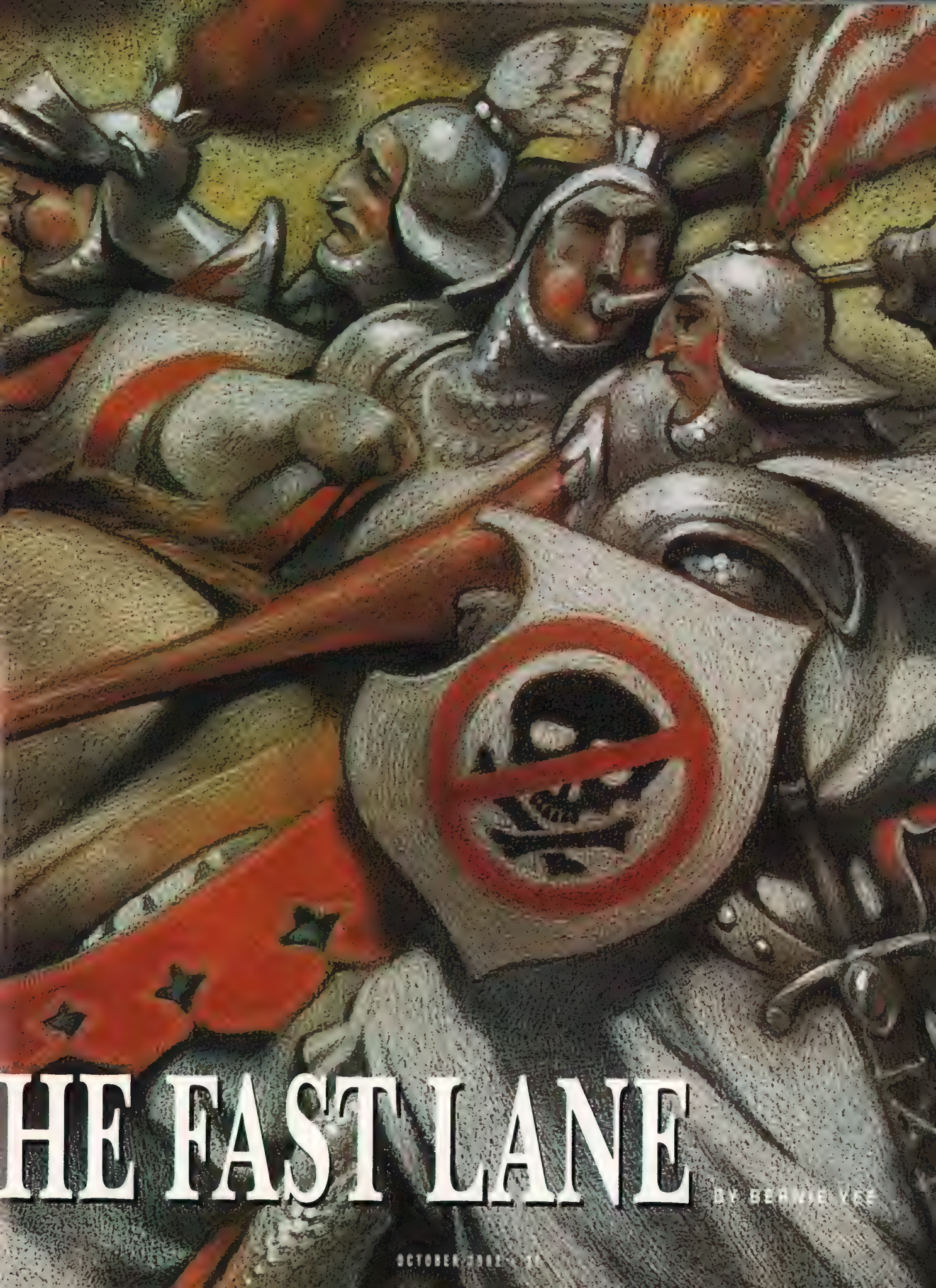
Yesterday's state-of-the-art game, complete with a rich plot and aids such as automapping, is now a bypassed standard, not a marvel loaded with extras. Fortunately, several veteran publishers of role-playing games still have their fingers on a formula that newcomers just can't seem to match.

IN THE BEGINNING, THERE WAS MAGIC

In the beginning of role-playing games, there were only two computer software engines that really counted: Origin System's *Ultima* and Sir-Tech's *Wizardry*. Each took a different approach to the genre, and, judging from both companies' latest offerings, were onto winning formulas even then.

FANTASY INT

ILLUSTRATION BY CARTER GOODRICH



THE FAST LANE

BY BENJAMIN YEE

OCTOBER 2002 \$4.99

Origin's **Ultima VII: The Black Gate** is the latest incarnation of a series that has grown from a zip-locked-bag package to a 21-megabyte multimedia event. Origin has attempted a little wizardry in its ambitious release of *Ultima VII*, and like Mickey in *The Sorcerer's Apprentice* sequence in *Fantasia*, such ambitions sometimes meet with setbacks.

Ultima VII is one of the largest games around, taking up 21 megabytes of hard-disk space, and a cool 500K for each saved game. The average PC game player is typically forced to clear room before installing the game.

But size isn't everything. Here, it's only half the story. *Ultima VII* requires a 386 PC and VGA; a 20-megahertz machine, mouse, and Sound Blaster-compatible audio card come strongly recommended. Even on a 33-megahertz 486, though, *Ultima VII* runs choppily, not because the micro-processor is slow, but because of the constant disk access. **Hyperdisk**, a disk-caching program sold as shareware, goes a long way toward making *Ultima VII* run more smoothly. (Make sure you enable the delayed disk-write option.) Origin wrote its own memory manager for *Ultima VII* (more on that later) and should have included a disk cache (perhaps even licensed Hyperdisk) with the game, as well.

MORALITY ON DISK

Lord British, a.k.a. Richard Garriot, *Ultima*'s designer and author, always has sought to put the gamer into a world with a moral framework. *Ultima VII* wraps its world in morality better than any other role-playing game to date. In fact, Origin rates the game "for mature players only" — there are weighty issues, and a lot of blood, in *The Black Gate*.

The game begins with an ominous ape-like face, stunningly animated, speaking to you via a Sound Blaster audio card. He's the Guardian, the new self-proclaimed ruler of Britannia.



Ultima VII sports a point-and-click windowing system.

A quick listen to his demonic laughter and you know all's not well in fantasy land. Sure enough, a moongate materializes in your backyard. A deep breath and a universe later, you're in the town of Trinsic with Lolo, near the scene of a ritualistic serial killing. Britannia is beset with all-too-familiar ills, such as drug use, homelessness, and a wave of self-righteous zealots who call themselves The Fellowship.

This group is based on the notion that the Virtues are unattainable. It claims it's better to provide "realistic" moral goals for people — sort of a capitalist twist on the notion that "greed is human nature, so let's use it for the common good." There's no doubt the group will cause trouble, but with *Ultima*'s moral ambiguity, good and evil are never clear.

Your first job is to solve the murder mystery, a quest that eventually leads you to the Guardian. Several sideways sojourns give you a non-linear sense of game play.

Your foray into Britannia is shown through a full-display, top-down perspective on a VGA screen wiped clean of any visible interface. You interact with the environment through an evolved point-and-click windowing system that's completely mouse driven. (You can use the keyboard if you want.) *Ultima VII* operates with only two commands: *move* and *use*. You pick up an object by using that object (simply click on it) and dragging it to your character. You cast spells by using your spellbook, and wield weapons by using them.

This real-world flavor is strengthened by objects' characteristics. Items have weight and other dimensions,

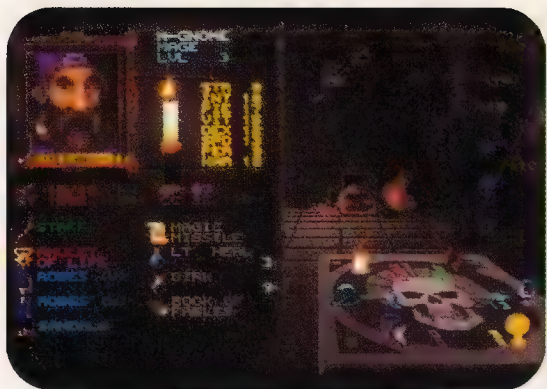
and you use them logically. You can milk a cow and churn the milk into butter, for example. Non-player-character interaction is especially well done. Conversation choices are menu driven and context dependent; they change as the conversations and the game progress. Unfortunately, *Ultima VII* omits a note-taking feature and automapping. Both should be standard in a game this size.

Realism permeates the game. Your character needs to eat and sleep, and the sun rises and falls as days pass. When thunderstorms occur, a cloud darkens the screen, and flashes of lightning illuminate the wet pavement.

As in previous *Ultimas*, the Avatar (that's you) must gather reagents to cast spells. Nasty hack-and-slash targets abound, but don't forget your main purpose in Britannia — it's easy to get lost amassing a body count or carrying out peripheral quests. *Ultima* helps direct your quest away from mayhem, because its early phases offer little combat (up to the second murder site). It gives you a chance to get your role-playing "legs" before you have to fight for your life. Once you do begin to fight, though, you battle in real time. In the heat of combat, things get confusing — it's hard to keep track of everyone when lots of characters are fighting — so you'll often hear the Guardian's taunts as members of your party perish.

Spellcasting is no simple affair, either. Lots of spells exist for the casting, but they require reagents to be successful. Between foraging for food and looking for spell components, *Ultima VII* is as much an exercise in resource management as anything.

But this sophisticated simulation comes at a price. The hardware requirements are formidable, but the complexity of the software exacts its own toll. A clean boot disk, with a mouse driver and HIMEM.SYS (and a disk cache), is required — no memory managers allowed, because *Ultima VII* has its own. And several bugs nest happily in the prodigious *Ultima VII* code. The first, and most widespread, occurs when you sleep — keys disappear from your pack.



Bane's sequel: Crusaders of the Dark Savant.



Spellcraft: a "SimMagic" approach to fantasy.

The quick fix is to drop your pack before you sleep. (Origin has provided a patch to correct the problem.) Other bugs exist as well. I discovered a second murder at a sawmill, for example, but when I got there, amid the milling townsfolk, the corpses and a piece of evidence were nowhere to be found. Still, *Ultima VII* can be a fabulous experience, *if you save your game often.*

BETTER LATE THAN NEVER

Wizardry is the second pillar in the role-playing pantheon. Where *Ultima* has always been a top-down game, *Wizardry* began with a simple line rendition of a first-person perspective. The series was getting a little long in the tooth until David Bradley unleashed *Bane of the Cosmic Forge*, which revamped the entire line. ***Crusaders of the Dark Savant***, *Bane's* sequel, was deep into beta testing as this was written. Sure, the release is running late — really late — but the game is worth the wait.

Crusaders' game system is a direct descendent of the well-crafted engine that made *Bane of the Cosmic Forge* so much fun to play. Modeled after pen-and-paper-style rules, *Crusaders* features spells of varying degrees and an exhaustively researched table of medieval weapons. But it also drops in a new list of weapons — not many fantasy games have stun prods. Like *Bane*, *Crusaders'* combat requires hundreds of calculations per round, and takes into account everything from magical effects to encumbrance and fatigue.

Time hasn't stood still at Sir-Tech, though. The graphics and animation

in *Crusaders* are now in 256-color VGA, and the point-and-click interface is now refined. Automapping has been added, but with a twist — it becomes a character skill, and as the skill increases, your map becomes more useful and detailed.

Crusaders shares the same strengths and weaknesses as its predecessor. An involved plot line and interaction with non-player characters remain its strong suits. The fascinating story follows up on the happenings in *Bane*. The twists here include the Dark Savant, a mysterious, otherworldly being whose motives aren't yet known, and a dead wizard who uncovered certain secrets for which many races — including your band of six — are searching. Your group represents the powers of magic, but magic coexists with science; don't be surprised if you face off against a bunch armed with laser weapons.

Crusaders' second strength lies in the realism of its non-player characters. *Crusaders* eschews *Ultima VII's* "inanimate realism" for a complex web of non-player characters who communicate with and compete against not only each other, but you, too. Your diplomacy skills are put to good use, as groups of non-player characters will have differing impressions depending on your decisions. The game's Infocom-like parser lets you converse in full sentences with those non-player characters who don't chop you up into little pieces.

Although it was incomplete at press time, *Crusaders* has an unequaled potential to involve you in a complex, character-driven world. Depending on the ending you reached in *Bane of the Cosmic Forge*, you can start at

three different openings, or begin a cold start if you haven't finished (or even played) *Bane of the Cosmic Forge*. Each starting point sets you up with a different standing in the world — certain non-player characters will

react and treat you differently depending on your starting place.

Parts of *Crusaders* feel anachronistic, though. The digitized sound effects are similar to *Bane's* and along with the music, can be repetitious and annoying. Monsters still explode when you kill them, and when they die, their weapons typically disappear. And after the smooth scrolling of something such as *Ultima Underworld*, *Crusaders'* graphics images seem choppy. Despite its pretty face, *Crusaders* lives in post-*Underworld* times: the graphics/sound/realism stakes have been raised, and the *Crusaders* engine is simply average, not state-of-the-art.

Crusaders also harbors an irksome character-creation process. Unless you port over your *Bane* characters (highly recommended), you must roll new characters. Each race has a set base of statistics, plus a random number of bonus points. If you roll a character with anemic numbers, you must still finish the process of selecting skills and profession before you can dump the character and start over.

Sir-Tech has taken a unique tack with role-playing games, and has come up with a formula that, while making you appreciate *Ultima Underworld* and *Ultima VII's* impressive features, also makes you realize that role-playing realism comes from the paper-and-pen core of the non-player characters that populate your world.

SOMETHING BORROWED?

S.S.I. has long been known as the licensee of the TSR *Advanced Dungeons & Dragons* game system, a license that's spawned the Gold Box

series, the Legend series, and the single Shadow Sorcerer title. Some gamers may not remember that S.S.I. had its own role-playing series long before AD&D hit the market. Bolstered by its success with AD&D, S.S.I. has returned to the scene with its own role-playing game, **Prophecy of the Shadow**.

Prophecy harkens back to a game called Questron. You play a solo character (good thing, too, because the combat AI should stand for *artificial idiocy*), a wizard's apprentice whose master has just been assassinated. The island you live on is populated by bandits, superstitious townspeople, and the requisite dangers. All this is done up in an early Ultima-like top-down VGA format that's smoothly animated, but not particularly dazzling.

The story revolves around a prophecy — an evil being will come back into the world. As one of the last wizards, it's your task to put a stop to the evil one — hardly an original plot. Your character is created through a series of personality-revealing questions *à la* Ultima VI, which balance your magic skills with your combat ability.

The game itself consists of a top-down display, with some digitized vignettes of live actors in period costumes. The conversation system may remind you of Ultima VII, in which you pick a list of words to ask the non-player characters. A button bar holding your commands runs down the left-hand side of the screen. Combat is simple — position the targeting box on your enemy and click the mouse. You cast spells the same way, but Prophecy sports comparatively few of those. The power of your spells is determined by your catalyst, a metallic ankh-like talisman that channels arcane energy.

Although you can move around this world in three game speeds, I found the fastest too quick for real-time combat, and normal and slow too sluggish to use in traversing the



Prophecy is smoothly animated but not dazzling.

island itself. You can play Prophecy's sound and music through a Sound Blaster, but I had problems choosing either the Sound Blaster or Sound Blaster Pro option. A patch should be available by press time, but it's mind boggling that a bug this substantial got to the final version.

If Prophecy sounds mundane, that's because it is. The magic system is unremarkable, and the combat system is simplistic. The interface is well planned, but the game does without automapping and note taking. The story line — supposedly the game's strength — is typical fare and doesn't involve you nearly as much as the plot of either Ultima VII or Crusaders of the Dark Savant.

The graphics images are good, but not remarkable, even though they include live-action video clips. It may have no distinguishable weaknesses, but its business-as-usual approach simply can't compete with the big kids on the role-playing playground.

Prophecy of the Shadow might have looked good two years ago, but in today's climate, it's simply a role-playing diversion.

DIG YOUR OWN DUNGEON

ASCII has none of the lineage of an Origin or Sir-Tech, or even an S.S.I. So it does what every newcomer does when it wants to make an impression — it buys talent.

Karl Buiter, of Sentinel Worlds: Future Magic and Hard Nova fame, has come to ASCII to introduce the magic-skewed role-playing game **Spellcraft: Aspects of Valor**. Promising, or so I thought.

Even in its basic premise, Spellcraft isn't like traditional role-playing games: Magic once existed on Earth, but those who practiced it were driven off by the advent of science. Now in their alternate universe, these magicians want to recapture this world, even though such a cross-over would be disastrous for both science and magic. The high wizard — your spiritual soul brother — summons you to prevent this disaster.

Spellcraft's strongest feature is its tutorial system, which guides you through the use of magic, this world's most important element. Your mentor tutors you in the skill of spell casting by providing idiot-proof scenarios in which you learn to mix spells, engage in sword play with some orcs, and cast spells in combat.

Physical combat may be simplistic, but magic is so elaborate that it requires note taking. The various colleges of magic offer spells of differing focus. Fire, for instance, is an offensive discipline. You cast each spell by using an aspect — a common item like a knife — and other ingredients, such as stones. In the right combination, and with the help of a magic word, these create a spell. You can even vary a spell's effects by changing the proportions of these items.

To handle all this, Spellcraft offers spell sheets to track ingredients. On one hand, this gives you a huge amount of spell-casting flexibility. On the other hand, it makes you feel as though you're making entries in an accounting book or playing with an arcane spreadsheet.

You travel between Spellcraft's magical and rational worlds via a gateway at Stonehenge. That link lets you meet with allies in both worlds, who provide spell components, hints, and even miniature quests. Such hints can be one-timers, so write down clues as you get them — Spellcraft not only has no automap (though it does have an overhead world map), it leaves out a note taker as well.

Graphics images are nicely done VGA screens sporting a more vibrant palette than Prophecy of the Shadow's. The top-down display will remind you

of S.S.I.'s Shadow Sorcerer, and the monsters are smoothly animated. The interface is of the ubiquitous point-and-click variety, of course, and distinguishes itself by not making itself too obtrusive.

Nonetheless, the game feels empty. As you roam the various dimensions, there are no real-world towns and shopkeepers. And don't worry about inventory. Come to think of it, there doesn't seem to be a set of character statistics or other meaningful character generation, either. Although Spellcraft seems to have more flash than Prophecy of the Shadow, it's the latter that comes closer to the traditional role-playing game.

Spellcraft feels less like an adventure than a spell-casting simulator. Magic is the central feature, but other aspects — magic items, armor, and non-player-character interaction — are neglected. Its plot is intriguing, but it's wasted in this unbalanced implementation. More than anything else, Spellcraft resembles the type of role-play games you'd expect to see on a video-game machine, not on a PC.

THE FUTURE OF FANTASY

You don't need to cast a spell to know that the future looks great for role-playing games. The trends are a bit less obvious, though.

Thanks to companies such as Origin and Sir-Tech, fantasy games are getting more realistic, and have a meaty, substantive feel. The irony isn't lost on most gamers. Origin's approach lets you expect to be able to pick up an object and do something with it when you see it. Sir-Tech eschews object-oriented game design for one that lets you interact and compete more realistically with non-player characters.

Another trend is best described as overkill, the tendency for publishers to produce mammoth games that push hard at the PC. A game that requires its own memory manager (such as Ultima VII) fits squarely into this trend. Sophisticated games become system hogs. Storage, too, is at issue, because without a CD-ROM drive, game size is certainly finite. It's unreasonable to expect players to clear off 20 or more megabytes of hard-drive space to run a game. (How many of us can afford to install Wing Commander II and Ultima VII on a hard drive?)

Not all releases will measure up to these new expectations. As two industry veterans push the state of the art, others disappoint with titles that just don't match up. Prophecy of the Shadow would have been a good game two years ago, but its lack

of both sizzle and storyline bode ill times for it and games like it. It's going to become increasingly tougher to compete with games such as Ultima Underworld, Crusaders of the Dark Savant, or Ultima VII if second- and third-tier publishers don't keep up in the technology wars.

Other directions, though creative, don't go down well with the core role-playing-game audience. Spellcraft may have taken a "SimMagic" approach, but magic can't exist in a vacuum. Without an end for which magic is a means, crafting spells just isn't that much fun. Gamers interested in learning the nuances of a complex magic system demand a complex world and challenges to match. Still, innovation must be encouraged. Spellcraft doesn't work (at least for me), but it may well be a step toward a more flexible, more realistic environment.

Maybe Spellcraft's problems come strictly from a lack of practice. The success of traditional role-playing design — refined through seven Ultimas and almost as many Wizardrys — are an ambitious benchmark. Companies such as Origin and Sir-Tech have spent more than a decade evolving their core titles to their current condition. As long as role-playing publishers keep trying, we keep winning. □

PRODUCT INFORMATION

Crusaders of the Dark Savant
Sir-Tech Software
P.O. Box 245
Ogdensburg, NY 13669
(315) 393-6633
\$69.95
640K IBM PC or compatible
10MHz or faster recommended
EGA, VGA
supports AdLib, Sound Blaster,
Thunderboard
DOS 5.0 recommended
requires hard-disk drive
mouse recommended

Prophecy of the Shadow
Strategic Simulations Inc.
675 Almanor Ave.

Suite 201
Sunnyvale, CA 94086
(408) 737-6800
640K IBM PC or compatible
16MHz 386 or faster recommended
supports AdLib, Roland, Sound Blaster
mouse recommended

Spellcraft: Aspects of Valor
ASCII Entertainment Software
P.O. Box 6639
San Mateo, CA 94403
(415) 570-7005
\$59.95
640K IBM PC or compatible
DOS 3.3 or later
256-color VGA, MCGA
requires hard-disk drive, 10MB free

supports AdLib, Roland MT-32/LAPC-1,
Sound Blaster
requires mouse, EMS memory

Ultima VII: The Black Gate
Origin Systems, Inc.
P.O. Box 161750
Austin, TX 78716
(800) 999-4939
\$79.95
2MB IBM PC or compatible
20MHz or faster
VGA
supports AdLib, Sound Blaster,
Roland MT-32/LAPC-1
digitized speech requires Sound Blaster
requires hard-disk drive
mouse, disk cache recommended

PLAY HARD

Sports games are growing up — pushing the technology as hard as flight simulators and displaying the kind of graphics detail that made top-notch role-playing games famous.

By Wayne Kawamoto



F YOU'VE PLAYED ROLES SO LONG you've got hack-and-slash elbow, or you've flown so many missions against polygon-fill topography that it looks like the moon, why not switch directories and play some games that were real before their virtual twins appeared on the PC?

We're talkin' jocks, sweat, grunts, groans, and Gatorade here. Talkin' football, baseball, basketball, and the Olympics. Talkin' computer sports.

Sports simulations ship enough of the real thing to your computer to make you imagine the roar of the crowd, the taste of roasted peanuts, the smell of freshly cut turf, and the sight of tobacco stains. About all that's missing are the goofy team mascots.

GROW UP, ALREADY!

Today's trend in sports games is toward more-realistic graphics — no small task. To animate accomplished athletes convincingly, these games must use the same cutting-edge graphics and animation that distinguish the market's most sophisticated



ILLUSTRATION BY NED SHAW



I WANT TO BE LIKE MIKE

Michael Jordan and polygon-filled graphics are a match made in gaming heaven. Only the graphics technology that dupes us into thinking we're flying an F-16 could make us pretend we're Air Jordan, the only flying object not licensed by the FAA. Can't you just hear the basketball-game titles of the future, stolen from flight simulators? How about "Chicago Bulls: Their Finest Hour," or "Secret Weapons of Michael Jordan?"

The newest program endorsed by His Airness, Electronics Arts' **JORDAN IN-FLIGHT**, features an innovative and realistic flight-like environment that integrates full-motion digital video into a 3D playing field. Called video-sim by its makers, the environment not only lets you view the action from any angle, but includes a digitized version of Jordan himself, armed with his signature slam and pull-up jumper.

The graphics images previewed for this not-yet-ready game are simply stunning. Because Jordan was video-taped from a variety of angles, you view the action from anywhere on the court. This game's as close as you'll get in any sports title to being on the court yourself.

In-Flight includes three-on-three, one-on-one, and three-point-shootout events, and promises realistic picks, rebounds, play calling, and man-on-man defense. A VCR-like editor provides instant replay and the ability to create highlight films.

Billed as the next new technological breakthrough in sports games — a virtual-reality-like presentation where you're immersed in action — Jordan In-Flight is a game to watch. They shoot baskets, don't they? — W.K.

entertainment software. No wonder, then, that sports games were among the first to digitize the motion of real competitors.

To keep bringing the excitement, strategy, and action of real sports to the PC, programmers must continuously improve the way graphics technology mimics lifelike images and motion.

Bringing home those graphics, though, demands some heavy-hitting hardware. If you've been singing "Take Me Out to the Ball Game" to your PC, you better add "buy me some peanuts and in-line SIMMs."

Today's new sports games require more-powerful CPUs (a 386 or 386SX micro-processor), audio boards, and VGA graphics. Some games even demand more and more memory beyond the 1-megabyte line to access all their bells and whistles.

Take football and baseball games, for instance. Unlike earlier titles — which could exploit either strategy or raw action — the latest products blend the two.

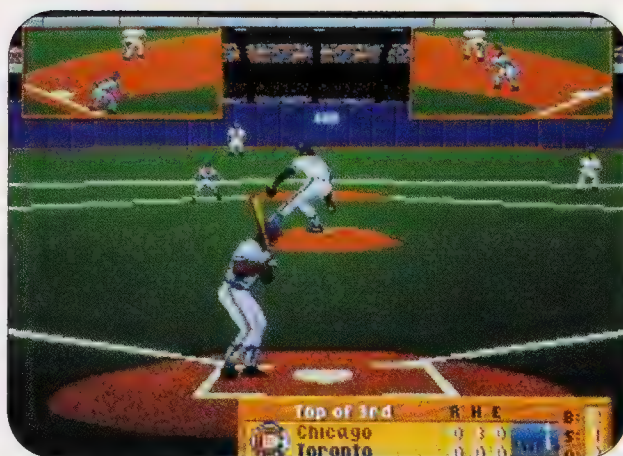
The consummate fan can't settle for just half the equation, for arcade action empties the mind (a terrible thing to waste), and management leaves the fingers twitching.

Thanks to more-powerful hardware and abler programming, today's comprehensive baseball and football games bring you sports arcade action with that managerial and strategic responsibility.

Even basketball and track simulations, long made only for the joystick crowd, have grown up in the past year. Where once they showed only rigid two-dimensional views, new titles and updates now sport three-dimensional environments where you find yourself right in the middle of the action.

Sports games have grown up. They're finally pushing the technology as hard as flight simulators and displaying the kind of graphics that made top-notch role-playing games famous.

So walk through the turnstile, stop off at the concession stand for a dog and a draught, and hunker down behind third-base line,



Hardball III — nice graphics plus the incomparable Al Michaels.

at midcourt, at the 50-yard line, or near the starting blocks.

PLAYING HARD BALL

Amidst a league of big hitters, including SSI's Tony La Russa's Ultimate Baseball and Electronic Arts' Earl Weaver Baseball II, comes a new kid on the baseball block, Accolade's **Hardball III**.

The bases may well be loaded. While La Russa is an admirable attempt to bring baseball greatness back to SSI, and Weaver is EA's followup to a game remembered as the first to blend strategy and action successfully, Hardball III comes onto the diamond with a roar. The *III* in the title stands for third time around, and, to use a mixed sports metaphor, for a Triple Crown winner among the software contenders for the baseball pennant.

Hardball III's triple threat takes that pennant because the game includes technological innovation, excellent and entertaining game play, and the most-attractive graphics of the three.

Hardball III may have its predecessors' cleats to fill, but it does so admirably. Most notably, Hardball III features the voice of Al Michaels, the noted ABC commentator. The results are impressive — player by player and play by play, Michaels calls it as his digital persona sees it.

The announcing is surprisingly detailed, and stunning when you first hear it. Michaels' voice makes you

think you're watching the game on television while controlling the players. When a batter's hit by a pitch, Michaels mutters, "Oh, that's gotta hurt." With the SoundBlaster card, the announcing is clear, although there's a slight hesitation between words. To hear Michaels, you'll need some hefty hardware, starting with an audio board and at least 2 megabytes of RAM.

Hardball III's graphics images are exquisite, with sharp-looking digitized ballplayers. These guys not only look good, they work together like clockwork, backing each other up on plays and cutting off the throws.

The arcade batting, pitching, and fielding are easy to play, and the variety of settings let you set the game at a level challenging enough to pique your interest yet low enough to eliminate those humiliating 32-0 shutouts. You can play an exhibition game, or go for the full championship season with a 162-game schedule, complete with an All Star break.

Hardball III doesn't forget the statistics side of baseball, but it's not as comprehensive as the others. You won't find bunting and streak ratings in Hardball III (though they're included in Tony La Russa), but its basic stats of batting average, RBIs, and the like are sufficient. Hardball III also tracks player stats throughout a season.

Another plus is that though Hardball III features fictional teams, you

can import players and teams from both Earl Weaver Baseball II and Tony La Russa Ultimate Baseball. The team and player possibilities are thus even much greater than at first glance.

Though this game isn't as statistically thorough as the other primary baseball titles, Hardball III's action, graphics, animation, and announcing get it safely home. Hardball III is the best baseball program on the market (for now).

PC PIGSKIN WITH A PERSONALITY

Breaking into the backfield of football software is another sequel to a successful game: Electronic Arts' **John Madden Football II**.

Pigskin games that settle for action or Xs and Os, not both, are as out of style as the old flying wedge. The newest generation of PC football has a strong statistical basis, great graphics, strategic managerial decisions, play creation and editing, and arcade action.

Witness the explosion of outstanding games in the last year: Broderbund's Playmaker Football, Accolade's Mike Ditka Ultimate Football, and now John Madden II. All successfully combine managerial strategy with on-the-field action.

John Madden II leads the rush with artificial intelligence that thinks like Madden himself, plus a statistical foundation and a comprehensive playbook and editor. Only Mike

Ditka Ultimate Football maintains an edge, and then only in graphics.

Madden II's strength is its combination of strategy and Madden himself. Correct play calling wins games, but as Madden writes in this game's documentation, to call the right play, you must know the matchup between your players and your opponent's. Madden II's innovative head-to-head mode lets you compare their ratings. Identify your strengths and the other team's weaknesses, then find the plays to exploit those differences.

You've got a wide selection to choose from: 81 plays, in fact, with many taken from Madden's own Raiders playbook. As you'd expect from a state-of-the-art football game, you can substitute players and change the lineup. About all that's missing is the clipboard or headset to throw down in disgust.

John Madden II comes with fictional teams (though they're based on real NFL teams), and tracks stats for those teams as well as individual players. Included are the 1990 pro teams; Madden's Pro All Stars (composed of players from his days as coach of the Oakland Raiders); composite teams of the 1969-78 Raiders, the Pittsburgh Steelers of the 1970s, and the San Francisco 49ers of the '80s; and an all-time All Star team.

The game's chalkboard is comprehensive, and lets you create and edit plays with tools that set positions, dictate player action, step through



Madden II: strategy, stats, and a dose of artificial intelligence.



The Games: Summer Challenge brings home the gold.



Michael Jordan In-Flight: virtual reality in the making.



Carl Lewis Challenge: coaching strategy plus fast arcade action.

the play, and even execute against the opposition in different defensive sets. Madden II also features a practice mode, where you can call the offensive and defensive plays for both teams. It's an invaluable aid as you learn how to compare teams, and shows you the results of a particular play against a certain defense.

John Madden II's arcade aspects are satisfying, but the game's creators chose a middle ground, and give you less control over players than other simulations do. (If you like managing more than twitching the joystick,

you can disable the arcade elements and concentrate on strategy.) You control your players on offense, but on defense you simply call the play and watch the outcome.

Not a bad idea, really, since arcade control of football defense can be confusing. Mike Ditka Ultimate Football, for example, decides which player is active by looking at the action. You may be in hot pursuit of the quarterback, but when he throws the ball, you're suddenly controlling the pass defender — another player. By the time you figure out who you are, the

receiver has caught the ball. Still, Madden II should have given players the option to pick between complete control and its current method.

On offense you first control the quarterback, then the ball carrier. Passing is in real time, and uses a gunsight-like aiming point, unique to football games. You still must look for your receivers, lead them, and toss the ball, but the sight is a satisfying answer to the passing problem all football games share. Interestingly, Madden II also provides an adrenaline-like "burst of speed." Press a button and the runner or receiver gets the extra energy needed to push for a bit more yardage.

Except for its run-of-the-mill graphics, John Madden Football II is the call of the day. The game goes the whole nine yards in terms of integrating management and strategy with decent arcade action.

WE REIGN IN SPAIN

Higher, faster, stronger. No, this isn't a description of your next dream computer (although you'll probably need it, given the trend in sports software), but the ideals behind the ultimate international athletic challenge — the Olympics.

Accolade's **The Games: Summer Challenge** takes the baton from its predecessor of last February, Winter Challenge. Summer Challenge, naturally enough, features eight events from the Games in Barcelona: pole vault, high jump, javelin, 400-meter hurdles, cycling, kayaking, equestrian, and archery. Don't expect to coach

BUT CAN HE BEAT MIKE POWELL?

The folks at Psygnosis are lucky. At least they didn't sign up Dan O'Brien, star decathlete, as the celebrity endorser of the company's new track-and-field game. At least Lewis went to the Games in Barcelona (though only as a competitor in the long jump).

CARL LEWIS CHALLENGE wants to make a run at bringing the excitement of five track-and-field events to the PC. Still under construction as this was written, Carl Lewis will feature digitized images of athletes competing in the pentathlon of javelin, 100-meter, 400-meter hurdles, high-jump, and long-jump events.

Psygnosis pins its hopes on an innovative approach in which each player (up to four) takes charge of a team of ten individual athletes. It's nice to see track-and-field games, which traditionally have been pure arcade action, grow up to provide some strategy.

In role-playing style, you train your team members to improve their attributes, including agility, speed, power, and stamina. It's up to you to decide on the best training — based on frequency, intensity, and duration — that'll bring your athletes to peak performance. Feedback screens show your progress; correct training pays off in increased attributes, while poor training stalemates your competitors.

After five weeks, it's time for the big event, and a switch back to arcade action and the joystick. From preliminary heats to the final event, you're going after the gold, just like Carl.

File this one beside Bo Jackson Baseball: good game, but some bad luck and poor timing on the celebrity endorsement. It only proves the tenuousness of the connections among fame, fortune, and fast running.

— W.K.

the U.S.A.'s Olympic team in Summer Challenge, though. Like its forerunner, it's pure arcade, a game that puts its best foot forward by combining 3D polygon-filled and bit-mapped images to create an outstanding presentation.

The electronic athletes of Summer Challenge look so realistic because real jocks were filmed, then digitized for the game. Backgrounds are detailed bit-mapped scenery that scrolls in the distance, while the foreground and structures are polygon-filled pieces like those you see in flight simulators. The effect is similar to PC flight, for Summer Challenge manages to convey a feeling of movement. That's different from past track-and-field programs, which used two-dimensional, from-the-side perspectives. Summer Challenge immerses the player in a seemingly 3D environment — each module shows the athlete from the rear running through the event. Graphics images are leaps and bounds above those of the last Olympic track-and-field game. (Epyx, now only a shell of its former self, published Summer Games four years ago.)

Joystick skills and hand/eye coordination are as important in Summer Challenge as steroids were to the East Germans. Like Accolade's Winter Olympics game, Summer Challenge is a great party game, since up to ten people may compete in solitary Olympic-style events to see who earns the best times and goes home with the gold.

The preliminary version of the game reviewed for this article featured excellent action and graphics in the few events that were ready. Most noteworthy was kayaking. Although the event hardly seems at first glance like a good candidate for the computer, it works surprisingly well. You control a kayaker navigating his way through the course's gates — somewhat like skiing the slalom. But currents and polygon swells shove you off course. You may be on target to get through that gate, go over a swell, and suddenly be up the proverbial

creek unless you can paddle against the current. Somewhat unpredictable, new and different, and with great graphics, the kayaking event is a blast to play.

Cycling felt like it came from the old Epyx Summer Games. You control a bicyclist by pushing the joystick button to pedal, and maneuvering for the best position. The 3D images are exquisite, and easily give you a you-are-there feeling.

Another event up and running in this version is the 440 hurdles. Though the rear view makes you feel like part of the action, it's a hurdle to estimate the spatial elements. This event may have been best presented in the traditional 2D side view.

Like Winter Challenge, this summer game breaks new ground with excellent graphics and unprecedented 3D action. It's easily the best arcade simulation of track and field to yet appear on the PC.

PLAY HARD

So where do sports games go from here? What's left to add? More realism for one thing, with better graphics and digitized, lifelike athletes. More bells and whistles, for another, bringing even more of the sports arena to the computer. Another element you can expect is improved artificial-intelligence algorithms that integrate more-sophisticated models of athlete behavior, and beef up the computer opponent's managerial smarts.

Eventually, look for voice recognition as an interface (chatter in the outfield may be next . . . *swing, batta batta*), and specialized devices to translate physical movements into on-screen club or bat swings. And don't discount the possibilities and promises of virtual reality. The holodeck you see in *Star Trek: The Next Generation* may be centuries away, but most of us would simply settle for going one on one with Michael Jordan or Clyde Drexler.

Sports software continues to push the envelope of entertainment software. All that's missing is the obligatory swimsuit edition. □

PRODUCT INFORMATION

Carl Lewis Challenge
Psygnosis, Ltd.
29 Saint Mary's Court
Brookline, MA 02146
(617) 731-3553
\$49.95
640K IBM PC or compatible
VGA
supports AdLib, SoundBlaster

The Games: Summer Challenge
Accolade
550 South Winchester Blvd.
San Jose, CA, 95128
(408) 296-8400
\$54.95
640K IBM PC or compatible
10MHz or faster recommended
EGA, VGA, MCGA, Tandy 16-color
requires hard drive
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Hardball III
Accolade
550 South Winchester Blvd.
San Jose, CA, 95128
(408) 296-8400
\$59.95
640K IBM PC or compatible
10MHz or faster recommended
EGA, VGA, MCGA, Tandy 16-color
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John Madden Football II
Electronic Arts
1450 Fashion Island Blvd.
San Mateo, CA 94404
(415) 571-7171
\$49.95
640K IBM PC or compatible
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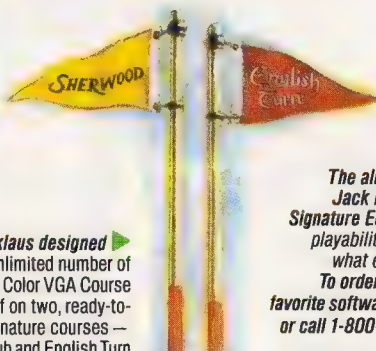


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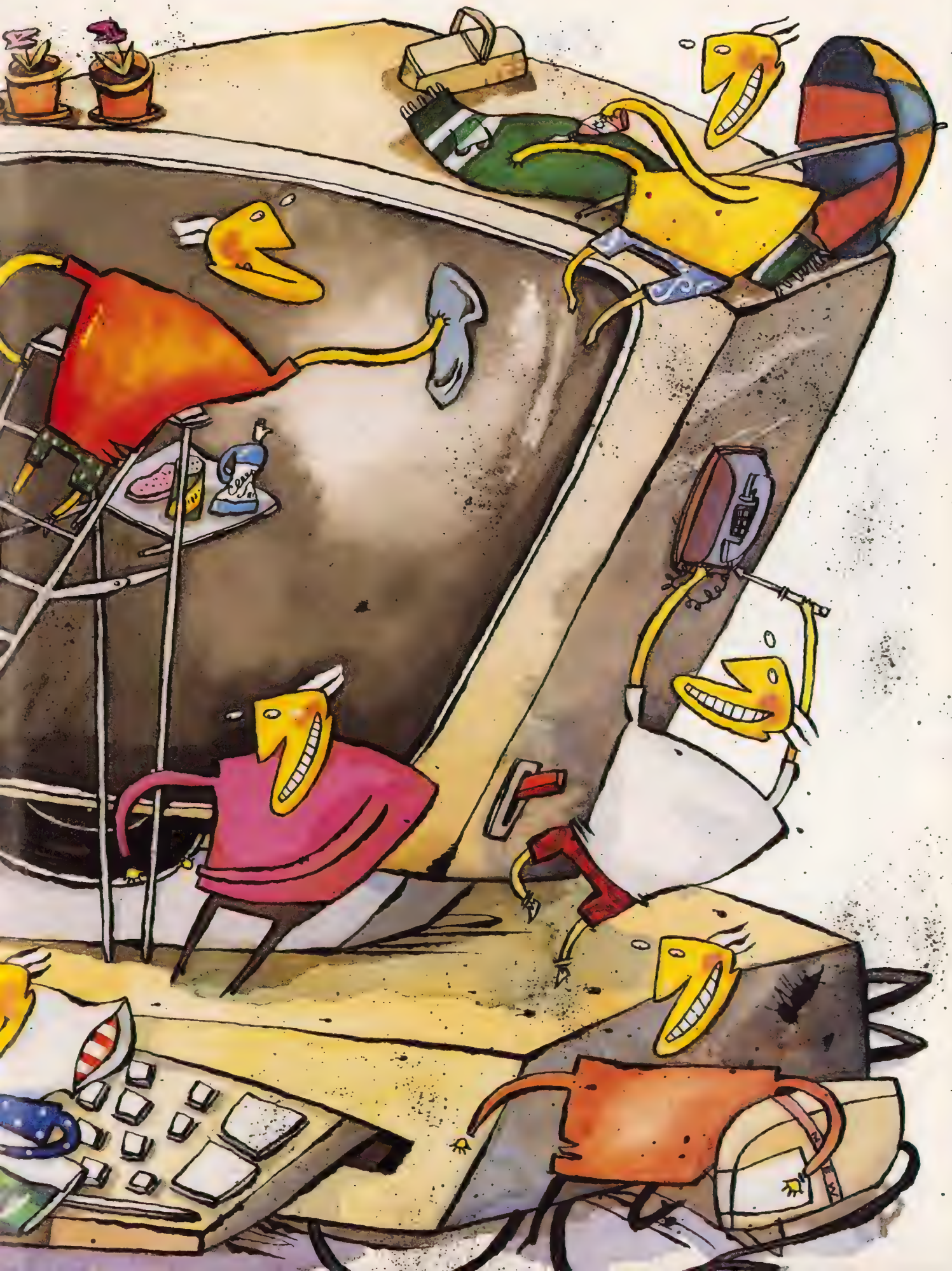
Beefing up your system with sound, memory, peripherals, and add-on disks gives your game playing a new lease on life.

By Peter Olafson

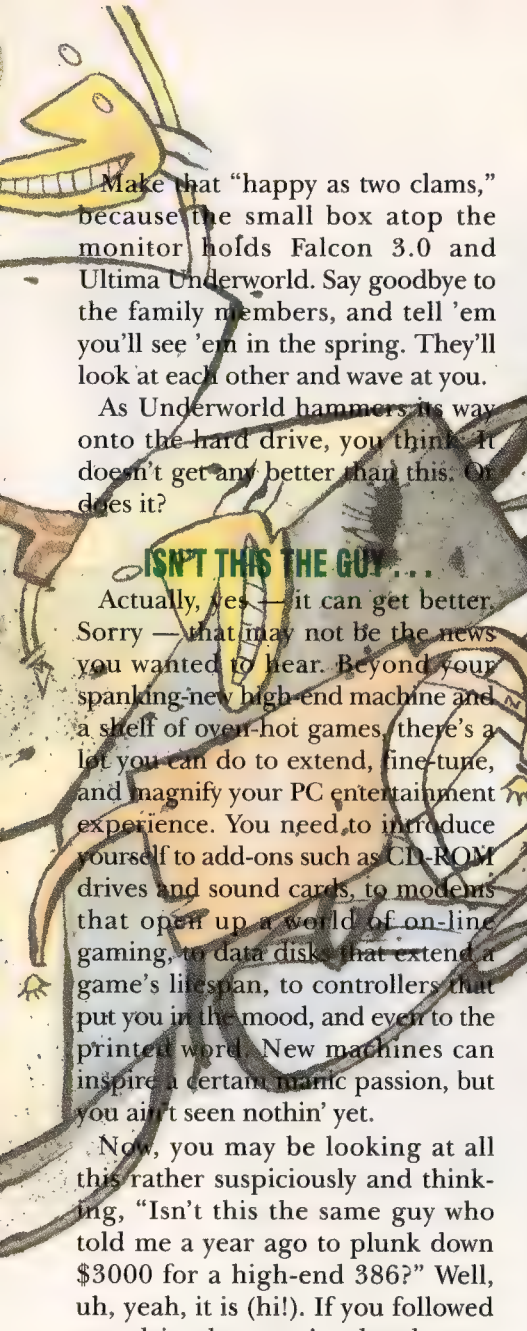
You break into a run when you see the brown curve of the U.P.S. truck disappearing around the corner ahead of you. Bells are ringing in your head: The new computer must be here. It can't be Mom's collector plates. The "Elvis in Heaven" series arrived yesterday, and Dad's "Belly Up" stomach brutalizer is on back order. Thar' she blows! Through the haze of the screen door, you see a new shadow on the front porch. You follow it to an office-block-sized pile of cartons — your new 386/33, tower-configured, memory-packed PC is here. Sharks in a blood-driven feeding frenzy observe more decorum than this. You briefly consider using your teeth on the strapping tape and settle for your keys. You rip off the bubble wrap — destroying the documentation and warranty card in the process — and endure a spasm of panic when you can't coax a DOS prompt out of the shipping cardboard still stuck in the A: drive. In a half-hour, you're as happy as the proverbial clam (even though the kitchen now looks like Styrofoam Peanut Land). 

ILLUSTRATION BY VALA KONDO





THIS OLD PC



Make that "happy as two clams," because the small box atop the monitor holds Falcon 3.0 and Ultima Underworld. Say goodbye to the family members, and tell 'em you'll see 'em in the spring. They'll look at each other and wave at you.

As Underworld hammers its way onto the hard drive, you think: It doesn't get any better than this. Or does it?

ISN'T THIS THE GUY...

Actually, yes — it can get better. Sorry — that may not be the news you wanted to hear. Beyond your spanking-new high-end machine and a shelf of oven-hot games, there's a lot you can do to extend, fine-tune, and magnify your PC entertainment experience. You need to introduce yourself to add-ons such as CD-ROM drives and sound cards, to modems that open up a world of on-line gaming, to data disks that extend a game's lifespan, to controllers that put you in the mood, and even to the printed word. New machines can inspire a certain manic passion, but you ain't seen nothin' yet.

Now, you may be looking at all this rather suspiciously and thinking, "Isn't this the same guy who told me a year ago to plunk down \$3000 for a high-end 386?" Well, uh, yeah, it is (hi!). If you followed my advice then, you're already most of the way home.

But this is different. There's a Big Blue line between upgrades and add-ons. (See "Mega PC," December 1991, p. 44, for my last discussion on upgrading your system.) Think of an *upgrade* as akin to trading in your Volkswagen-like XT for a Beamer-like 486. An *add-on* is less ambitious — it's more like putting a nice stereo in the dash. An upgrade is a new foundation, while an add-on just makes a good house better.

Naturally, those streets converge now and again. The new sound card you'd want to include in an upgrade, for instance, is also a dandy peripheral. That's why this time we'll talk less about what all these things cost

and more about what they'll do for your household's digital playground.

WHERE'S THE CHANNEL CHANGER

The car-stereo analogy is a good one, because CD-ROM is an ideal place to start your add-on adventure. A maturing market and falling prices suggest that a CD-ROM drive will be the add-on item for at least the next couple of years.

The typical CD-ROM player is an unimpressing peripheral with a 5.25-inch drive's profile and a 3.5-inch drive's push-button ejector. At a glance, you might mistake it for either, at least until you spot the discs, which look identical to the ones you slip into your stereo's CD.

But these CDs hold far more than music. They're home to staggering amounts of data — in excess of 600 megabytes (around 30 Ultima VIIs placed end to end) — and so offer the potential for the kind of vast, detailed games that until now only the imagination could have designed. It's a *bona fide* breakthrough for a medium already straining our patience with hard-disk installation procedures. (Leather Goddesses of Phobos II comes on 17 3.5-inch disks.)

There are any number of drives on the market, priced at \$350 and up, and about a half-dozen upgrade kits available at prices starting at around \$500. Upgrade kits typically include a drive, a sound card, and an assortment of software.

I've been lucky enough to try out Creative Labs' **Multimedia Upgrade Kit**. I installed it myself, something that goes against my grain. I don't like opening my computer. I'm afraid that a critical and irreplaceable screw will fall into an inaccessible high-voltage crevasse, that a hydra-headed cable will fly loose, that I will pour Diet Coke on the motherboard, or simply that, on closing it up, something won't work that worked fine before.

Imagine my surprise. I found the Kit easy to install, easy to get running (barring my own dumb mistakes), and easy to have fun with once it was tucked inside my PC.

The Kit comes with, among other things, a game — ICOM's **Sherlock Holmes, Consulting Detective**. Sherlock is enormously entertaining, a splendid example of both the technical skill and extended substance that CD-ROM can lend to game play. You steer the great sleuth and his chum Watson through 19th-century London and three mysteries packed full of lengthy video segments, digitized speech, newspaper articles, graphics stills, zipping windows, and clues. It hardly could have existed on disk, but on CD-ROM it's involving and thoughtful.

I even coaxed my spouse, who doesn't care for computer games, to come into the office and take a peek. Usually all she says is *ay yi yi*. Not this time. She grinned at the monitor and declared, "It's like watching TV." High praise from a representative of the PC phobic.

Once you've upgraded to CD-ROM, you've got a myriad of games from which to choose. To play LucasArts' **Loom** on CD is to rediscover that musical Brian Moriarty adventure and, more importantly, to feel the emotions involved. Digitized voices may just be a perk in some games, but here they lend a whole new semitragic perspective.

Sierra's **King's Quest V** on CD seems like King's Quest V on floppy — until you realize there's no text. It's all spoken, making King's Quest a stage play, with you as script master. Origin has indicated plans for a September release of a deluxe CD-ROM edition of **Wing Commander II** that will incorporate the speech-accessory pack and both special operations add-on disks. And if you've ever scoffed at Broderbund's **Where In the World Is Carmen Sandiego?** as just a kid's game, you won't once you see and hear the CD edition. This international feast of music and sights — *with a twavel agent who tawks like cheese from Joisey* — makes old Carmen nearly spanking new. There's an almanac in the box, but there's a living almanac on that compact disc.

This is the first shot fired in a revolution. Big and brawny as disk-based games have become, CD stands to change the way we think about computer games. And yet, if you're hesitant about CD-ROM, well, it's understandable. You'll probably want something new to play on it, and many of the games released to date, while extensively recast (and even wholly reinvented) for the new format, are nevertheless re-releases of existing games. It may be difficult to justify spending, say, \$70 or so to answer the question *Where In the World Is Carmen Sandiego?* when you've already found her on floppy.

And frankly, at this point CD-ROM's potential has only barely been tapped. In these early releases, the extra horsepower is more likely to be used for more and better video, graphics, animation, speech, and sound — the raw material of game making — rather than greater depth of plot and play. That's going to take a while, both to conceive and to implement. Stay tuned; the best is yet to be. Virgin's massive **Seventh Guest** may be out by the time you read this, and don't be surprised if you begin to see PC versions of titles originally released for Apple's Macintosh or even Commodore's CDTV.

SOUNDS RIGHT

If you go the way of a CD-ROM upgrade kit, you'll get a sound card as part of the bargain. Good deal. If you aren't heading down the CD-ROM route yet, get an audio board anyway. It's a necessity. Although the PC's built-in speaker isn't bad for certain effects — it's quite good for mimicking a voice overheard on the telephone — jet engines and electric shavers make better music.

Sound cards have come a long way from their early days, as have developers' efforts to use digitized voices and sound effects. Today's instrumental and professional music is rarely incidental, and is likely to become even more important as games resemble movies more closely.

As for which board to buy, you've got a plethora of cards to choose from, including **Sound Blaster**, **Sound Blaster Pro**, **ProAudio Spectrum**, ATI's **VGA Stereo-F/X**, Roland's **MT-32** or **LAPC-1**, **SoundRunner**, **Thunderboard**, **Sound Galaxy NX**, **Sound Commander FX**, and goodness knows what else. (Don't forget the **AdLib** card, which is still for sale even though its maker is out of business.)

Once you have a sound card, you'll want proper speakers. (If you're using a program such as Software Toolworks' splendid **Soundworks** to turn your CD-ROM drive into a CD player, they're absolutely imperative.) Good woofers and tweeters can broadcast sound throughout the room, and keep your ears from sweating under headphones. After hearing a few prime games wheedle through little plastic bargain boxes, you'll develop an appreciation for the rounded, full sounds that pour out like molten steel from a solid speaker.

I'm not just waxing poetic. If a game puts out classical themes, a more delicate unit may be fine — speakers to suit the task at hand, as it were. But for a big, bruising game such as *Castle Wolfenstein 3D*, speakers add enormously to the sense of panic and excitement when you walk into a new room and suddenly discover a half-dozen guards shouting, "*Achtung! Achtung!*" as they draw a bead on you.

If you have a stereo system in the same room as the computer, that's ideal. Plug that sucker in. Most of us, though, aren't so lucky. You'll probably have to invest in a separate set of speakers.

This is much like shopping for a monitor. There's a rash of suitable speakers out there, and you can spend as much as you want to spend: from \$30 up to nearly \$500. As in most purchases, you get what you pay for. I've been happy using Acoustic Research's **Powered Partners** for three years — first with **AdLib**, then with **Sound Blaster**, now with **Sound Blaster Pro**. They're durable, heavy,

little triangular door stops, and while they're on the expensive side, they've performed magnificently.

Sometimes, of course, music is simply music. But the right music or digitized sound can transform a game into an event — give moment to a discovery, heat up an aerial engagement, make defeat bittersweet, and triumph sweet.

Take Mindscape's *Four Crystals of Trazere*, for instance. A very nice isometric-perspective role-playing game, *Crystals* includes a wide selection of bard-played songs, each with different magical effects. They're especially useful in combat, but I like to put them on sometimes when they're of no use at all — just because they're memorable, semiclassical-style pieces of music. The music stays with you long after the computer is off, and becomes part and parcel of the way you think and feel about the game. I can hear *The March of the Bold Ones* even now. Without it, with just the screams of the dying, the click of levers, and the chunk of opening chests, *Crystals* sounds unnaturally silent. The music's gotten into my system.

JUMP THROUGH THE WINDOW

Speaking of my system, let's talk operating systems for a moment. I know — it sounds more like technoweenie talk than game-related, but it does have a payoff.

If you've bought a 386 or 486 PC recently, you probably have DOS 5.0, so you can move right on to the next section. If not, you may still be laboring under DOS 4.01 or even 3.3. These are fine for many games — the minimum requirement is still typically DOS 2.1 — but more and more, you'll find that a game's memory requirements are outstripping your available RAM. When loaded into high memory (above 640K), DOS 5.0 is the first to use less conventional memory than its DOS siblings — an asset more and more games will either require (as *Falcon 3.0* does) or use to their advantage.

A word, too, about systems within systems. We're talking Microsoft

THIS OLD PC

Windows here, of course. Windows gives the MS-DOS world a GUI (graphical user interface) similar in function to those enjoyed by the Macintosh (and even less-popular machines, such as the Amiga).

As a gamer's environment, Windows is still young, but there are

some fine packages available. Not unnaturally, Microsoft itself was first out of the blocks — releasing three solid game bundles with a nice assortment in each. There's also a huge repository of good public-domain and shareware Windows games that has begun to move

beyond the initial kernel of card and strategy titles.

Developers also have begun to see the light through the "Window." Maxis Software, for instance, has released excellent versions of **SimCity** and **SimEarth** that run under Windows. Electronic Arts has

PRODUCT INFORMATION

Action Stations, \$49.95
Action Stations Scenario Utility, \$21.95
RAW Entertainment
3027 Marina Bay Drive
Suite 110
League City, TX 77573-2772
(713) 538-3399

America Online
8619 Westwood Center Drive
Vienna, VA 22182
(800) 827-6364

CompuServe
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Columbus, OH 43220
(800) 848-8199

Creative Labs Multimedia Upgrade Kit
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1901 McCarthy Blvd.
Milpitas, CA 95035
(408) 428-6600
\$850

Falcon 3.0
Spectrum HoloByte
2061 Challenger Drive
Alameda, CA 94501
(415) 522-0107
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Flight Control System, \$99.95
Weapons Control System, \$99.95
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10150 Southwest Nimbus Ave.
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Tigard, OR 97223
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GE Information Services
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Rockville, MD 20850
(800) 638-9636

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MicroProse Software
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Hunt Valley, MD 21030
(301) 771-1151
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Harpoon, \$59.95
Scenario Editor, \$39.95
North Atlantic Convoy, \$29.95
Mediterranean Sea, \$29.95
Indian Ocean/Persian Gulf, \$34.95
Three-Sixty Pacific
2105 South Bascom Ave.
Suite 380
Campbell, CA 95008
(408) 879-9144

HeroQuest
Return of the Witch Lord (included)
Gremlin Graphics Software
Carver House
2-4 Carver St.
Sheffield S1 4FS
United Kingdom
price unavailable at press time

King's Quest V CD-ROM
Sierra On-Line
P.O. Box 485
Coarsegold, CA 93614
(209) 683-4468
\$69.95

King's Quest Companion
Silicon Valley Systems
16235 El Camino Real
Suite 4
Belmont, CA 94002
price unavailable at press time

LAPC-1, \$595
MT-32, \$595
Roland Corp.
7200 Dominion Circle
Los Angeles, CA 90040
(213) 685-5141

Loom CD
LucasArts Games
P.O. Box 10307
San Rafael, CA 94912
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Megafortress, \$59.95
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Irvine, CA 92714
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Secret Weapons of the Luftwaffe, \$69.95
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San Rafael, CA 94912
(415) 721-3300

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Orinda, CA 94563
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brought over an exquisite and enhanced take of **PGA Tour Golf** and the attendant **Tournament Courses** disks. Virgin has its Windows version of **Risk** out the door, with one of **Monopoly** in the works.

If you're familiar only with DOS games, you'll find playing under

Windows a rather refined, delicate, and engaging experience, and a very un-MS-DOS-like journey. It feels natural and intuitive. The only downside is that, as with CD-ROM, many Windows titles have already seen life under DOS. But, again, like CD-ROM, the best Windows games make you feel as if their DOS ancestors were just a daydream.

To OS/2 or not to OS/2? If you turn on the PC for games and little else, probably not. I've yet to see anything beyond a passel of shareware games designed specifically to take advantage of IBM's new multitasking operating system. (Unlike Windows, OS/2 replaces DOS; it doesn't sit atop it.) We'll keep you posted.

HANDS ON

You don't have a mouse? Not so unbelievable, because it's not always necessary. Most PC games can still be configured for keyboard use. But the mouse lets you play more intuitively—to reach for a command as you'd reach for a condiment on a kitchen shelf. In *Ultima Underworld*, for example, it's like your good right arm. Indeed, it's even better than that. In a sense, the mouse becomes you. Get one, but make sure it's Microsoft compatible.

You'll want a joystick, too—flying by mouse can be awkward—and there's a world of joysticks out there to be pulled and pushed. Some have suction cups on the bottom, some have task-specific buttons, some have special grips, and some don't look like joysticks at all. There's a whole subgenre of flight yokes (a truncated steering wheel of the kind you see in aircraft cockpits)—the idea being that you shouldn't be distracted from the sensation of flight by a device that looks better suited to saving Earth from alien invaders. Colorado Spectrum even makes a **Mouse Yoke**. Anything for authenticity.

One such joystick maker is Thrustmaster—an outfit that specializes in flight-stick controllers that assume various functions ordinarily served

by the keyboard. To date, the company has released a **Flight Control System**, which plugs into a dual-port game card and is designed after the F-4 Phantom stick; the **Weapons Control System**, which plugs into the keyboard port and works in tandem with the FCS; and rudder pedals, which go on the floor and plug into the joystick port via a Y-adapter.

This group also has memory-resident programs for LucasArts' flight simulators and Falcon 3.0 that let you decide which functions move from the keyboard to the stick. The company is also working on an improved Weapons Control System that will include a split throttle for individual engine control and a trackball to direct the targeting box.

A newcomer on the scene is Gravis' **PC GamePad**. (The company also makes the well-respected Advanced Gravis two-button joystick.) This looks like a controller for the Super Nintendo Entertainment System, with its directional pad on the left-hand side and a quarter of colorful buttons on the right. A nice touch for those who prefer fast fingers to quick wrists.

DIALING FOR DEFEAT (OR VICTORY)

I first learned about Thrustmaster—and much, much more—on *Cine's Games Roundtable*. Computer gaming may have started as a solitary occupation, but it may not end up that way. Equip your PC with a modem (2400 baud rate minimum) and you can tie into either a modem-owning pal across the county or country, a local BBS (bulletin-board system) for a knockdown game of chess or *Global War* (an on-line variant of *Risk*), or a large on-line community such as **CompuServe**, **Genie**, **Prodigy**, or **America Online**.

The challenge of facing the most intelligent computer opponent is nothing compared to a wily human on the other end of the phone line. For proof, just play something such as *Modem Wars*, *Command HQ*, or *Global Conquest*. You usually can predict computer moves once you

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(800) 999-4939

THIS OLD PC

have some experience — but humans will always surprise you.

And you needn't play just one opponent at a time. Most of the on-line services run elaborate role-playing, combat, or trivia games involving dozens of people simultaneously. You'll make friends and go hunting together. You may prosper and perhaps even become a leader in the community. Or you'll be stabbed in the back and die like a dog at a monster's feet in some out-of-the-way place.

On my first visit to GENIE's Gemstone III, I put in at the local armorer to get outfitted, and was ready to take my stuff off the counter when someone else tried to do it for me. "Exception, your honor!" I said.

"Oh, was that yours?" he asked. He put it down and took his leave. I'd no sooner left the shop when he attacked me. What for, I don't know. Maybe he thought I was going to attack him. "What was that for?" I asked. He said nothing. Then he ran. A little later, I was killed by a rat. Tough town.

A modem also opens up a huge library of public-domain and shareware games. You'll need to be a bit cautious with the older stuff — much of it is from CGA and EGA days and is inconsistent in quality — but many of the more-recent titles are quite remarkable and sometimes even close to commercial quality. (The arcade game **Captain Comic** really seemed to get things started.)

Good recent examples are the premiere episode of Id Software's **Castle Wolfenstein 3D** — a three-dimensional, first-person action game with gorgeous graphics and fast scrolling — and Epic MegaGames' splendid arcade **Jill of the Jungle**. If you want to try out a new tile set for a celebrated public-domain mah-jongg game, you'll find dozens of user-created sets on the nets. And, if you haven't the time or the skill to build missions for **Secret Weapons of the Luftwaffe** or **Harpoon**, you can sample the work of others.

On-line services are also a direct line to game publishers, who provide

product support on many forums. It's a speedy, informal way to overcome a technical difficulty, get unstuck in a game, or just share wit, wisdom, and opinion.

Another welcome benefit from on-line access is game upgrades — typically in the form of archived patches you can download to your computer, decompress, then invoke to upgrade a given game to the most recent version. Such patches correct bugs, make features more reliable, and sometimes add new ones. Recent months have seen the posting of new updates to **Gunship 2000**, **Falcon 3.0**, **Magic Candle II**, **Ultima Underworld**, and **Knights of the Sky**. (At press time, an update to **Earl Weaver Baseball II** is in testing.) Just watch your on-line time, because bills can mount up.

THE PRINTED WORD

So far, everything we've mentioned plugs into the computer. Here's something that doesn't — books. There's a library of books to help you understand the games you play and the concepts behind them. **Turn & Burn** (COMPUTE Books) is a guide to **Falcon**; **The King's Quest Companion** (Silicon Valley) makes the first four episodes of the celebrated animated adventure into a story (and naturally helps you through all the treacherous parts).

The SimCity Planning Commission Handbook and **The SimEarth Bible** (Osborne McGraw-Hill) help you manage metropolitan and global economies and ecologies. **The Official Guide to Sid Meier's Railroad Tycoon** (COMPUTE Books) aids your quest to become a robber baron.

Others, such as Origin's series of five **Quest for Clues** books, compiled by Shay Addams (of QuestBusters), is designed to help you out of a tight spot.

Also, game companies often issue hint books designed to help players through specific games without giving away the farm. Info-com's could be revealed only with the use of a special magic marker. Accolade's

can be read only through a piece of red plastic.

NEW WORLDS ON DISK

Most games have a finite shelf life. Either you run through what they have to offer or you get bored or stuck or something new catches your eye before you finish. (How many of those games on your shelf have you actually completed?) The good news is that the fat lady isn't singing quite so much any more. *Game Over* doesn't mean what it used to. That's because the data disk is alive and well.

LucasArts, for instance, has released no fewer than four data disks for its World War II flight sim, **Secret Weapons of the Luftwaffe**. Origin has graced owners of both **Wing Commander** and **Wing Commander II** with two follow-up disks each, including new missions, new graphics, and new characters. Three-Sixty has released three scenario disks for **Harpoon** and one (Operation Sledgehammer) for its B-52 sim, **Megafortress**. Spectrum HoloByte plans a campaign disk for **Falcon 3.0** and MicroProse one for **Gunship 2000**. RAW Entertainment has published a data disk for its WW II naval game **Action Stations**, and Quantum Quality Productions a WW II data disk for its war-game-for-the-rest-of-us, **The Perfect General**. The list goes on and on.

Admittedly, the data disk is still mainly a flight simulator and war-game operation, but not entirely. For instance, the PC edition of **HeroQuest**, an isometric role-playing game from the UK's Gremlin Graphics, comes with the ten-mission expansion disk **Return of the Witch Lord**. And Maxis' **SimCity** sports two new graphics sets — one takes place in the past (Ancient Asia, Medieval Times, Wild West), the other in the future (Future USA, Future Europe, Moon Colony). This isn't just a new-look **SimCity**, it's like rediscovering the original game.

Say, isn't that the U.P.S. truck over there? Last one to the front porch is a rotten gamer. □

It makes J-8s cry and MiGs fighting mad.

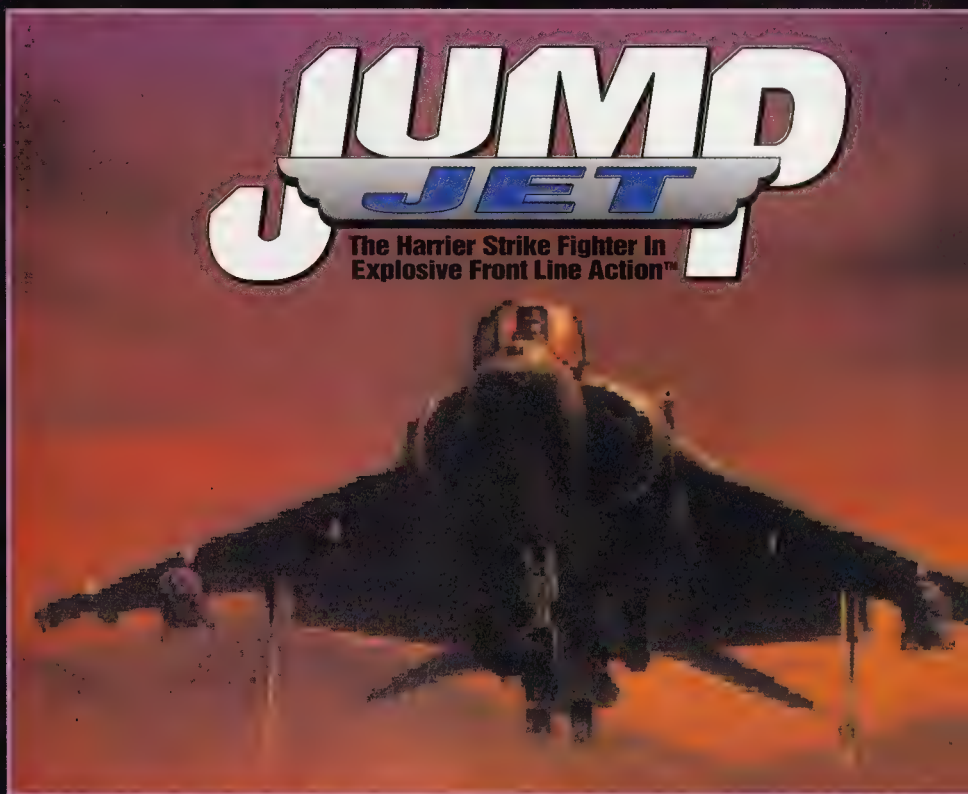
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PCG REVIEWS

LINKS 386 PRO

By Ed Ferrell

Not only is Links 386 Pro's greens fee \$130.05 less than Pebble Beach's, it comes with an ironclad no-ball-will-be-lost guarantee. For less than \$70, you can tee up at some of the best-known golf courses in the country, play as many rounds as you want, and almost, almost smell the freshly mown fairways.

This update to Access' popular golf simulation may not fix anything that wasn't broken, but its 32-bit technology and digitized screens of actual courses turn out some of the hottest graphics you've ever seen on a digital driving range. The scenery looks so good you won't even mind knocking around in the rough all day. This is one great game.

DOIN' THE WAVE

Links' smart installation program polls your PC, finds your graphics setup, and installs the appropriate version. Numerous VESA drivers help your computer's graphics card drive this powerful engine and your monitor display it. Super VGA (SVGA) is a must for Pro, but you've got some leeway on PC speed — even on slower platforms, each screen refresh won't take more than four to five seconds. You always can take comfort, even during delays, that you're playing faster on the PC than you can on real turf.

Links 386 Pro paints its screens in waves; grass and ground first, then background, and finally the trees, from background to foreground. Such pictures are worth a thousand words each, and are augmented by great sound support. Everything from gallery applause to announcers' comments liven up the game. It's



Links 386 Pro: some of the hottest graphics you've seen on a digital driving range.

gratifying to hear *Nice par!* when you deserve it, but you can turn off the sound if you tire of hearing *Looks like it's in the tall stuff* once too often.

It shouldn't be hard to scare up a foursome in Links 386 Pro, which makes group golf easy with its multi-player mode. Each player picks a golfer — an eerily photo-realistic figure that looks awfully yuppie-like — and outfits him or her in a different shirt color. It's nice to see female characters show up in an electronic golf game — after all, a quarter of America's 20-million-plus golfers are women. Even so, electronic golf clubs such as Links 386 Pro are too much like some country clubs — nary a minority in sight. Access promises a broader and more politically correct choice soon.

Links 386 Pro includes no computer player, which is a relief, really. Some other golf games provide a playing pro, but who wants to be reminded of how poorly he or she is playing?

What is welcome is Links' unique record-game option. Once you record it, you can store a game on disk, or even send it to a friend via modem, so that he or she can play you stroke for stroke.

You also can save single shots, so your hole-in-one can pump your ego perpetually. These save-game features can actually improve your game — play against your best effort so far, then if you (the most recent you) win, save that round. You'll always play your best, and against your best, simultaneously.

A DIGITAL CADDY

Picking the proper club is easy in Links 386 Pro, which offers a selection menu that lists approximate distances for each club. This electronically affluent game even has a caddie option that judges the right club for each shot automatically. But there's much more to a good golf shot than grabbing the right stick.

DARKSEED

By Bernie Yee

Put the wind indicator into effect and use the mouse to point the aiming bar. For the mathematically inclined, more precision is available by setting your aim with a 360-degree rotation disk. Open or close your stance; move the ball forward to your left foot for drives, or toward your right foot for short shots. Soon you'll be hitting fades, draws, and chips, or blasting out of a bunker.

All shots are available — even shanks, duffs, slices, hooks, and whiffs. Thank goodness for buttons for gimmies and mulligans (for use during friendly games only). Links 386 Pro lets you customize your swing, then save setups for future shots. Traditional grid overlays for fairways and greens help you see the lay of the land, and can be set to appear by default. This is an appreciated aid, because you'll want the grids on the green most of the time.

Links keeps more-detailed statistics than a CPA (some are impossible to keep on a real course), such as longest drive, longest drive on a particular hole, average putts, percentage of greens in regulation, and so on. You can assess your game easily, improve your course management, and lower your handicap.

If you own this sports simulation's predecessor (just plain Links), Links 386 Pro includes a conversion utility that updates the old course disks. Although not as good as the course images in Links 386 Pro proper, they're an improvement over their original versions. More reasonably priced course disks are promised for this hi-res game in the future.

Links 386 Pro's digitized look not only gives you great graphics images, it means that someone at Access has a pretty fantastic job, walking around taking pics of these great golf courses. You think he or she didn't take a bag of sticks along?

Access Software, 4910 West Amelia Earhart Drive, Salt Lake City, UT 84116, (800) 800-4880; IBM PC, Tandy, or compatible; 2MB RAM, 16MHz 386SX or faster; 8MB RAM, 33MHz 386 or faster recommended; super VGA; requires hard-disk drive, 13MB free; requires mouse; \$69.95

An artist dominates Darkseed. Not a programmer, not a designer, not a writer, but an artist. This surrealist painter, H.R. Giger, known to both science-fiction and art fans, is most famous for his design of the alien in the movie of the same name. Described as biomechanical — a melding of the organic and the artificial — his distinctive work is scary enough to give even Sigourney Weaver chills.

With stunning effect, Giger has put his lavish imprimatur on this adventure game. But art alone can't carry a computer game; even the most psychedelic, most macabre design work is responsible for only part of any game's success. So it is with Darkseed. Its mechanics look lost among the artistry. Still, it's an auspicious debut for Cyberdreams, a company chock-full of entertainment-software veterans.

THE GIGER COUNTER'S CLICKING

You begin the game as Mike Dawson, a writer who rents an old Victorian mansion, because he's in search of new ideas. Instead, he receives a nightmare — Gigeresque and graphic — of an alien implanting an embryo into his skull. (Sound familiar?)

Dawson awakens with a headache, and only a few days to figure out what happened before the embryo sprouts like some twisted Athena from his skull and unleashes a reign of *Alien*-like terror on the unsuspecting world.

It turns out that the house contains a gateway to the Dark World, which is home to the Ancients (reminiscent of H.P. Lovecraft's Cthulu work, admittedly one of Giger's inspirations). Dawson, represented in Darkseed by a nicely animated digitized figure, ventures into this alien world in a decidedly unsettling adventure as he tries to foil the Ancients' evil plans.

In a game in which Giger's art is almost everything, it's surprising that Darkseed's designers went not to super-VGA graphics, but to a more limited 640-by-350 16-color VGA resolution. Actually, the small palette serves Giger's work well, because he uses a limited color scheme himself. (Dark, muted colors dominate any Giger painting.) More disturbing is that the display occupies a little less than half the screen (probably a memory-saving decision). You'd think that a game so devoted to images would want them as large as possible. Darkseed fills in digitized speech and sound at appropriate points.

Darkseed uses yet another variation on the point-and-click, mouse-does-it-all interface, and lets you cycle



Darkseed has great graphics images, but art alone can't carry a game.



Loom CD features a deep storyline and movie-like sound and animation.

through three pointers: *move*, *use*, and *look*. The game itself proves more problematic. Unfortunately, some puzzles are less than logical, and demand real hit-or-miss brawn, not problem-solving brains. To ensure that all the doors in the Dark World are open for Mike, for instance, all the doors in the real world must be open, too. Because doors close behind you, you must go out of your way to leave them open.

Other constraints include the short time you have in which to solve the mystery, and a needless pixel hunt for objects. During the latter, for example, you must move the pointer across some objects more than once to see their contents — for no apparent reason. As in almost all adventure games, the key to success is frequent saves to disk.

Darkseed can be difficult, sometimes needlessly so, but its world is so interesting that you may not mind wandering around for a bit. All in all, Darkseed is the most intriguing adventure to pop onto the PC screen for some time. While established publishers keep churning out clones, Cyberdreams at least has something new and different — and plans for more of the same down the line, as it introduces more games that favor artistic imprint, such as a collaboration with *Blade Runner*'s industrial designer.

Darkseed succeeds visually, and is bound to please the graphics-adventure fan, even though its credentials in

the puzzle department are less than impressive. But what may be best about Darkseed is its portent for the future of gaming — a dark and twisted future indeed.

Cyberdreams, 21243 Ventura Boulevard, Suite 208, Woodland Hills, CA 91364, (818) 348-3711; IBM PC or compatible; 12MHz or faster; 640K RAM; VGA; supports AdLib, Sound Blaster; requires hard-disk drive, mouse; \$69.95

LOOM CD

By Lafe Low

Destiny shall draw the lightning down from heaven; roll its thunder far across the sea to where I wait upon a shore of wonder; on the day the sky is opened and the tree is split asunder.

Deadly prose like this aside, Loom is a cinematic tapestry that engages you like few other games. And though it's on compact disc, resulting in rich, movie-like sound, voices, and animations, it's the depth of its story that makes this adventure role-playing game such a delight.

IT'S DRAFTY IN HERE

You begin your journey on the Island of Loom, the place where the Guild of Weavers retreated long ago after society grew suspicious of its inbred ways. Owing to a prohibition

against marriage outside the Guild, the Weavers have disintegrated slowly but steadily. Since the birth of Bobbin Threadbare, chaos has grown within the fabric. It's this chaos that you, as Bobbin, must ultimately face.

When you first visit the hall of the elders, the keepers of the loom, you acquire your distaff, the tool that helps you sense when you're near a magical presence, and with which you'll weave the drafts you need to live out your destiny. Long ago, the Guild transcended from weaving tapestries to blending tones into drafts that influence the world. A *draft* is a sequence of four notes, which, when played to an object or being, has a particular effect. The first one you learn is the relatively simple draft of opening, but there are also drafts to make yourself invisible, inspire great fear, or weave gold from straw.

On the Island of Loom, as everywhere in this mystical realm, clues abound. When you stumble into the forest and explore the holes in which a band of owls has made a home, you hear the individual notes of a draft. When the four notes are assembled, you may well assume you have a full draft. But what's it good for? Think then of what an owl can do that you can't, and you may have it.

Weaving drafts is simple. It's finding them and learning to use them that are hard. Fortunately, you don't have to wait to find out whether or not a draft works. If you see a swarm of red stars, it's a draft (but not the right draft). A larger cloud of blue stars means you've got it right. Once you've figured out two or three drafts (write them down, but don't bother memorizing them, because they'll change slightly with each game), try them out.

It's a cliché in adventure games, but try everything. Look at everything. Anything that appears as a small icon in the lower-right-hand corner of the screen demands at least a closer look.

FEAR NO EVIL

Unlike many other adventure games, *Look* lets you try, try, try without fear of dying, dying, dying. While



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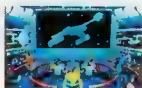
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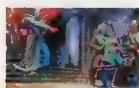
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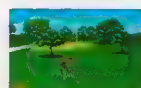
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Atomino is a puzzle game that's made up of the building blocks of matter.

other games let you wander around the wrong corner, then drop off a sheer cliff or into the grasp of a hungry beast, Loom encourages you to explore freely. You may not find what you're looking for, but at least you won't have to start from scratch.

Because this version of Loom comes on compact disc, the music, the voices of the actors, and the animation will draw you into the story as never before. The characters' tones, for instance, are ideal — just the right blend of young and old, with exactly the variety of accents you'd imagine.

Another simple convenience is that although Loom comes on CD, it's not a multimedia game. It doesn't demand a special sound board; instead it uses the CD-ROM drive's own built-in audio (just like your music CD's). If your CD-ROM drive is connected properly and your speakers or headphones are at the ready, all you need for a good time in Loom is insatiable curiosity and a sense of wonder.

As its name and its literary conceits imply, Loom draws you into its very fabric. As you tangle with your early explorations, you'll soon find yourself interwoven within the tapestry of this rich fantasy. Maybe the only way you'll return to reality is to weave a draft of transcendence. Then again, perhaps that won't be your desire.

LucasArts Games, P.O. Box 2009, San Rafael, CA 94912, (800) 782-7927; IBM PC or compatible; 286 or faster; 640K RAM, DOS 3.1 or later; VGA; requires CD-ROM drive, CD-ROM Extensions 2.1 or later; mouse recommended; \$99.95

ATOMINO

By Jim Bail

When's the last time you made something out of nothing? When's the last time you created matter out of the building blocks of the universe? Not recently? Really?

Then you need a turn with Atomino, Psygnosis' game that, strange as it sounds, combines dominoes and chemistry and takes you down to the atomic level in a puzzling race against the clock.

It may seem like a repeat of high-school Chem 101, what with chem-teacher jargon like *valence* and *electron* floating around, but Atomino is almost as addictive as that granddaddy of addictive PC games, Tetris.

ATOMIC STRUCTURE

Similarly to Tetris, Atomino features a playing area in which you combine pieces provided from the top of the

screen. Rather than work with the abstract blocks of Tetris, though, Atomino asks you to assemble real matter — atoms, complete with their valences — to create covalent bonds and, ultimately, molecules. Once that's done, the molecule vanishes from the screen and you start over. Does that sound easy? It is at first, but as you get deeper into Atomino, atoms come more rapidly and in an order that always seems exactly the opposite of what you need. You must react quickly and place your atoms strategically, because blunders can bury you quickly.

A small science lesson helps you understand Atomino. Atomic nuclei are surrounded by electrons. Think of these electrons as open hands poised to grab onto electrons from another nearby atom. When that happens, a covalent bond is created and the two atoms are joined. A complete molecule is simply a structure of atoms in which there are no more free combinations.

Your job in Atomino is to combine atoms into complete molecules, all electron hands joined. Thank goodness Atomino uses atoms with no more than four electrons. It's hard to imagine the game's difficulty if it made you play with atoms riding herd on ten or 20 electrons.

THE ATOMIC PIT

Atomino's screen consists of two separate areas. At the right is the atomic pit into which atoms fall, while to the left is the game board on which you place those atoms.

At first the atoms fall into the pit slowly, but their speed increases as you move through the game's levels. There's room for only six atoms in the pit, so they pile up if you don't put them on the board. When the seventh atom falls into the pit, the game's over.

A control board at the upper-left-hand corner displays pertinent game information, including size and number of molecules still to be assembled to reach the next level, current number of atoms on the board, and the *Extra Round* goal,

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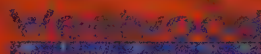


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which rewards you with a bonus round for a molecule made up of numerous atoms. Your score shows at the top of the screen.

Atomino offers two play modes. In *level-oriented* play, the computer gives you tasks such as building three molecules with seven atoms each. Each level gets progressively more difficult. In *free-style*, you simply build as large a molecule as you can in a quest for points. Free-style may sound easier, but because the atoms keep coming faster while you're trying to make a large molecule, there's often not much space available on the game board.

By virtue of its theme, Atomino flirts with being an excellent educational tool. Unfortunately, that's where it stops. The game's basic concept — making a puzzle game out of the building blocks of matter — has potential, but its designers obviously decided to limit Atomino to entertainment. During a game, you'll create some intriguing molecules; it would be interesting, possibly even educational, if Atomino noted those combinations, for instance. Another item on a wish list would be information from the periodic table of elements on the atoms involved. But the manual does do an excellent job of teaching you what you need to know to succeed at the game — basics of atomic bonding, positional strategy, and play hints are covered.

In the end, though, it's the game that matters. And Atomino is quite a game. *Addictive* is a good description. Good thing, too, because you won't get past the third level unless you play Atomino again and again. It's only through repetition that you really learn where to place atoms, or gain a sense of the relationship between atoms and their placement on screen. Maybe alchemy isn't so tough after all.

Psygnosis, 29 St. Mary's Court, Brookline, MA 02146, (617) 731-3553, (800) 438-7794; IBM PC or compatible; 640K RAM; monochrome, CGA, EGA, VGA; supports AdLib, Sound Blaster; \$49.95

GATEWAY

By Barry Brenesal

The main characters in Gateway, Legend's new graphics adventure, don't even make a cameo appearance. They're the Heechee, an ancient, advanced spacefaring race that vanished long ago, leaving only a single substantial trace. A small satellite has been discovered in orbit around our sun, and it's packed with abandoned mini-spaceships — an alien parking lot.

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Games so rarely do justice to science fiction's potential that when

one comes through with a credible story line and believable characters, it's time to celebrate. Gateway is one such game, and is given a leg up on run-of-the-mill science-fiction PC games because it's inspired by Frederick Pohl's best-selling Heechee novels (including the first and most popular, from which the game takes its name).

Legend deserves credit for capturing some of the novels' atmosphere, which is surprising, given that atmosphere isn't this puzzle-oriented company's strong suit. But Gateway conjures up the seediness and triviality of 21st-century Earth and its industrial civilization, and contrasts it with an awe of the unknown and the technologically god-like Heechee. It's an outstanding game.

ARTISTIC LICENSE

Not a little of this atmosphere is the product of Gateway's sights and sounds. Legend's previous releases provided excellent graphics in hi-res EGA (which looked crisper and loaded faster than lo-res 256-color VGA). Legend chose cleverly to go all the way when trying something different. Thus Gateway offers not only hi-res, 256-color VGA art, but hi-res 800-by-600 super VGA, too.



Artwork and color are excellent in Gateway.

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MS-DOS Screens Pictured.

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Although you'll notice a brief pause while the screen redraws on any computer slower than a 20-megahertz 386SX, the wait is worth it. (Try a good disk cache and a video accelerator board if you really want to see graphics fly.) Both the artwork and the color are excellent in Gateway — almost something you can feel — whether they depict the polished metal of gloomy, well-policed corridors or the gritty appearance of the human outpost colony.

You'll be less thrilled by the well-executed, but dull, animated sequences. Spaceships leaving planets and traveling across star systems generally look like retreads of *2001: A Space Odyssey*, no matter which medium they're on. That's the case on the PC, too. But the monologue sections — non-player characters delivering several screens' worth of important information against a black background — really give the artists' skills a chance to shine. (Check out the technician on the second floor of the corporate-headquarters building.)

Gateway's soundtrack is just as good. Most of the game's music combines fusion jazz and oriental modes, suggestive of futuristic films such as *Blade Runner*. The eeriness of alien encounters is enhanced greatly by unconventional modern-music scores.

PUZZLE MASTER

On the other hand, Legend's policy of stripping its interactive objects down to those necessary for the plot works against Gateway. You'll find only two small exhibits in the satellite's museum, for instance, and you view those on a single screen. This undercuts the suspension of disbelief that the artwork and music have developed so carefully. Legend may set interactive-adventure game standards in many areas, but the company could learn a bit from Sierra's titles about how irrelevant visuals contribute to a game's mood.

As in other Legend games, progress in Gateway means completing a variety of puzzles successfully. At their simplest level, they require little more

than common sense and an ability to follow directions. If you need to reproduce a code on an alien navigation unit, for example, you enter it correctly or risk materializing your spaceship inside 500 miles of sheet metal.

The truly vintage Legend mind benders, though, demand detailed observation and an ingenious turn of the mind. You'll have to look for unlikely combinations of objects, and perform certain actions in correct order and in a minimum number of moves. These puzzles aren't easy, which accounts for the high sales of Legend hint books. You won't need to buy one for Gateway, though — a hint book is enclosed with each box.

Gateway introduces a third kind of puzzle, which is more fiendishly difficult than anything Legend has offered before. Called *virtual realities* (VRs) and generated by extremely sophisticated computers, they do actually seem real. Each reality is a programmed life simulation that is attractive, threatening, or both.

The puzzles they present are many-layered. First, you may not always know when you've entered a VR, because the simulations are sometimes remarkably good — and if they are, your first task isn't solving the problem, but simply discovering that a problem exists. Once you realize you're inside a VR, you need to determine what it's been designed to do, something called its *Main Directive*. Then you'll need to determine how to break or overload it.

Neither is easy, even in the simplest Gateway VR. And things get much, much worse when the *Main Directive* becomes something unpleasant, such as killing the human subject. But then, it's all part of an average day's prospecting out among the stars.

Dialogue, situations, graphics, sound, and virtual realities combine to make Legend's Gateway not only an excellent translation of science-fiction prose, but a terrific game in its own right. We can only hope that, like Pohl's series of novels, Gateway the game is only the first of several titles

set in the universe of the Heechee, those unusual, intriguing, and invisible characters.

Legend Entertainment Company, 14200 Park Meadow Drive, Chantilly, VA 22021, (703) 222-8500; IBM PC or compatible; 640K RAM (SVGA, VGA), 512K RAM (EGA, CGA); DOS 2.1 or later; supports AdLib, Roland, Sound Blaster, RealSound; \$59.95

GODS

By Barry Brenesal

Tell me when you get tired of fighting the forces of evil. Let me know when the freedom of the world, even of the galaxy, gets to be too heavy a burden. After all, I've got something a little more personal — immortality.

In Konami's *Gods*, you can live forever — if you can run, jump, shoot, think, and steal fast enough. Not strictly an arcade game, *Gods* fits more snugly into the arcade-strategy category, where fast thinking is as well rewarded as a fast finger on the joystick button. The game even takes your playing skills into account.

Hindered only by its pathetic documentation and lack of a save-game feature, *Gods* delivers plenty of stylish, frantic excitement.

HERCULEAN EFFORT

Gods plays loosely off the storyline of the Olympian gods of ancient Greece. In Konami's retelling, the gods created a huge paradise for themselves on Earth. Unfortunately, the city was invaded by the forces of darkness when it was left unoccupied. In a rash moment, the Olympians promised to grant one wish to the human who could evict — without mercy — the new residents. Only Hercules came forward. He'd succeed, he said, and he wanted immortality as his due. Slapping their heads in god-like dismay, the Olympians agreed to abide by their word. They were gods, after all, not lying, shiftily humans.

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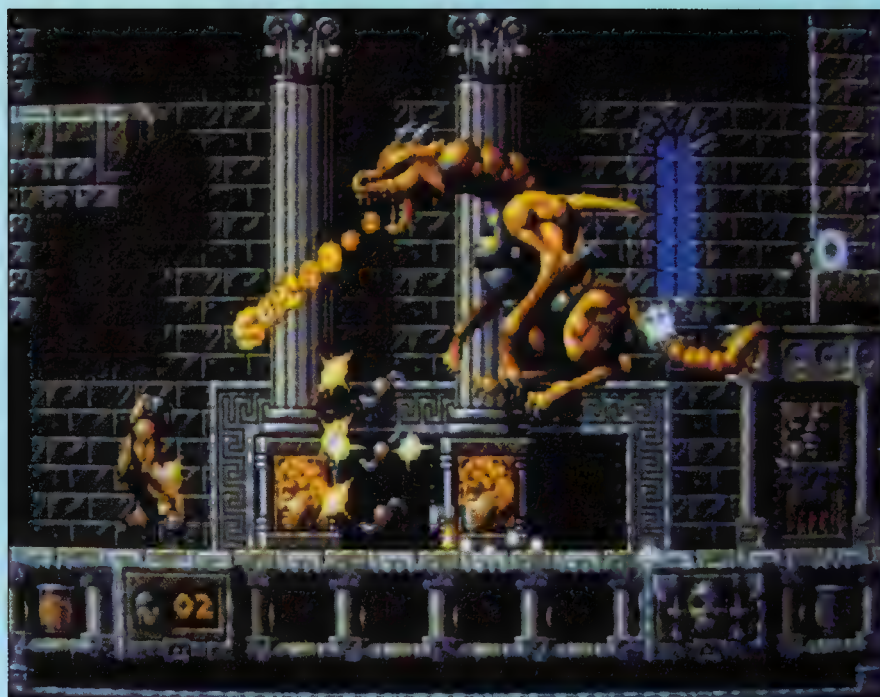
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Gods delivers plenty of stylish, frantic excitement.

You step into Hercules' skin and rampage across four different and unfriendly environments: the City, the Temple, the Labyrinth, and the Underworld. Each environment splits into three levels of increasing complexity and difficulty, culminating in confrontations with immense, evil, and understandably irritated Guardians. If Hercules wins, you move to the next environment. If a Guardian wins, you die in real life, and it keeps all your software games and splits for Reno. (Just kidding.)

Actually, you get three lives in a round, and losing one returns you to a spot near your fatal mistake. After you kill a Guardian, you receive a password. Type it in and Hercules starts on the first level of the next environment. You can do this even if you've gone through all three of your lives and restarted the game, so write down those passwords.

DESCENDED FROM THE CLASSICS

Gods isn't strictly an arcade game, but is better described as arcade strategy, an evolving game form that has turned up a lot lately. The genre began with simple arcade hits, such as *Asteroids* and *Space Invaders*, in

which play relied on fast reflexes and an overwhelming amount of caffeine for success. Later games (such as another classic, *Zaxxon*) varied the scenery and required more than just a quick trigger. Recently, strategy, adventure role-play, and war-game elements appeared. Many of the latest popular games feature this mixture of fast-moving, fast-thinking elements.

There's plenty of arcade-style action in *Gods*, which has the usual layered maze of rooms, trap doors, and ladders. Expect to tangle with strange, dromedary-like death dealers, and vicious flying harpies. But you'll need to think, too, if you're to locate secret passages, buy special potions, find better weapons, and solve timed puzzles. Thieves may steal your precious belongings, for instance, but you can trick them into grabbing the useful treasures Hercules can't reach.

The variety of the opponents' species is small, but they make up for this lack with a ferocity that would do a used-car salesman credit. More ominous still, the evil hordes get smarter as you advance across the levels. They dodge better and track more ruthlessly, and they attack in larger numbers and lay more-cunning traps.

Some games with an emphasis on hair-trigger reactions lose their players quickly by expecting instant expertise. Not so in *Gods*. The game includes a built-in timer that judges the skill level of the player periodically and takes appropriate action. An expert with deadly skills receives tougher monsters and bonus lives for killing them along the way. A mental paraplegic (like myself) doesn't lose points, but gets both fewer and weaker targets.

It's still not an easy fight — you wouldn't want to meet one of these guys in a dark alley. But you'll get some distance into this game while building your skills, and that's more than the average arcade game allows.

But the greatest challenge in *Gods* isn't part of the game at all. It's trying to figure out how to work the thing. *Gods'* documentation features thumbnail black-and-white reductions of beautiful color screens. They look like mottled-gray postage stamps, from which you're expected to decipher how all *Gods'* parts interact. What's more, you can't experiment in this game after saving a good position. *Gods* doesn't permit saved games. The best you can do in a tight corner is go for a pause, which is a poor alternative.

At least the pause key gives you a chance to look at the world around you, though. And *Gods* is certainly worth a look. The movement is life-like, the animation relatively smooth, and the VGA artwork is excellent. Sound effects and occasional music contribute appropriately to the mood of your epic battles.

Even if the quest for immortality is something you don't mind putting off for a weekend or two, *Gods* provides plenty of thrills for the novice and arcade expert alike.

Konami, 900 Deerfield Parkway, Buffalo Grove, IL 60089, (708) 215-5111; IBM PC, Tandy, or compatible; 12MHz or faster recommended, 640K RAM, DOS 2.1 or later; EGA, VGA, MCGA; supports AdLib, Roland, Sound Blaster; joystick optional; \$39.95

MUTANOID MATH CHALLENGE

By Cynthia E. Field

Where do dead appliances go — to the local landfill, or maybe to a massive recycling center where the Maytag man moves old refrigerators into the smelter?

If you believe the design crew at Legacy Software, castoff clothes washers, barbecue grills, and flatirons are set adrift in outer space. There, amorphous green Mutanoids crawl inside, just as hermit crabs assert squatter's rights inside conch condos at the beach. But Mutanoids aren't some alien crab that can't walk straight. In fact, they display impressive brainpower.

The Mutanoids get to strut their smarts in Legacy's first space-age program, Mutanoid Math Challenge, a computational-learning title for kids aged seven to 14. (The sequel, Mutanoid Word Challenge, should be ready this fall.) It goes without saying that kids can beat the Mutanoids at their own game. All it takes is a sense of humor; occasional assistance from talking TV heads Vectra, Prime, and Omega; and the ability to complete intersecting math equations on a *Scrabble*-like game board.

As a classroom enrichment activity, Mutanoid Math Challenge is a sure-fire winner. As a title for the home hard drive, though, Mutanoid doesn't deserve your dollars.

NUMBER CRUNCHERS

Children playing Mutanoid Math Challenge pick their opponents from a cast of 15 alien characters. Kitty the Mutanoid vacuum cleaner claims to be the "purr-fect" pet. Edie Weedy, the blonde Beverly Hills weed whacker, confesses, "I'm a born socialite, dahling." And Lotta B. Hinds, the Mutanoid hair-stylist's chair with the New York City accent, whines, "Oh, gaash, I aaalways see the worst side of everyone." In the

spacy world of the Mutanoids, no good deed goes "un-pun-ished." Although the aliens seem a bit too smart-alecky sometimes, kids will probably love the Mutanoids' irreverent, cranky style.

But the level of disrespect can be unsettling to some parents when the game pokes fun at older people — uh, appliances — such as Grandpa Chester, the broken-down chest of drawers from Shady Pines Old Age Home. Grandpa Chester tends to be forgetful, confusing his sock and underwear drawers.

Then there's tough-talking Sudsy Malone, the combination clothes washer and Italian boom box. Stereotypes such as these may be acceptable in a movie spoof, but they're out of place in an educational game. (On the plus side, you can play the game as either gender, and choose among characters representing different racial backgrounds.)

It's ironic, though, that Legacy Software didn't have to resort to low-brow laughs to be entertaining. In fact, many of the Mutanoids' silly quips exude gentle, good-natured humor that's both funny and uplifting. I.M. Tall, the Mutanoid ladder, boasts that he excels at "higher" mathematics, for example.

Cameo appearances by TV journalists Walter Croncoid and Connie Choid are fun, too. On one occasion, Croncoid interviews Perky the coffee pot: "I'll be really steamed, I mean boiling mad, if we lose the Math Challenge. Cappuccino, anyone?" The cartoonish *Jetsons*-like scenario, colorful graphics, animation, sound effects, and musical jingles contribute to the overall playfulness.

CALCULATED FUN

The game itself is appealing, too, although Legacy's off-disk copy-protection scheme — like so many others — is gratuitous. The playing field on the game board consists of intersecting rows and columns of colored cubes. Picture the matrix of wooden tiles that evolves during a *Scrabble* game and you've got the idea.

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Kids can stretch their math muscles in Mutanoid Math Challenge.

Unlike *Scrabble*, though, Mutanoid Math Challenge presents a grid of equations-in-the-making. Some are oriented horizontally; others, vertically. The program fills in selected cubes with a number (from one to 99), an operand (for the mathematically rusty, that's a symbol representing one of the four basic functions), or an equal sign. Players select each blank cube with the keyboard or click on the cube with the mouse before entering an appropriate number or operand as they try to complete each five- or seven-cube equation.

You can enter numbers and functions with the keyboard or use the mouse to click on the colorful on-screen calculator-like keypad. The latter's a bit confusing, because its numbers are arranged like a phone dialing pad — 1-2-3 at the top and 7-8-9 at the bottom — rather than like the PC's own numeric keypad. Most kids should adjust quickly to the inconsistency, though.

Kids score points and win promotions in rank by completing each equation correctly in a preset time period. (Turn off the timer if you want less stress.) Boosting scores takes some strategy, such as incorporating a more difficult operand into an equation. It's true that $20 + 10 = 30$,

but it's also true that $50 - 20 = 30$. The second equation, however, is worth at least five additional points because Mutanoid says subtraction is more challenging. You can triple a cube's point value by splatting it with a Gelatoid, an arcade-like critter who whisks around the screen before each turn commences.

COUNT ON IT

Mutanoid Math Challenge features three difficulty levels you can customize, five achievement ranks, a Hall of Fame, and a glop-or-be-glopped tournament ceremony. The program can track scores for as many as 40 players — a value-added option for classrooms — but a kid can't compete directly with a sibling or classmate. That's too bad, because turns taken by Mutanoid opponents tend to be time-consuming, monotonous, and distracting.

Other flaws are more serious. Mutanoid Math Challenge froze on two different occasions during testing for this review, forcing a PC kick-start.

At another juncture a character quipped, "So what? I'm losing to a 286 computer disguised as an alien." Strange, because that particular PC sported a 386 microprocessor.

To its credit, Mutanoid Math Challenge offers an opportunity for open-ended math exploration — something that sets the game apart from traditional drill-and-practice programs. Most equations can be constructed in myriad ways. Bonus word problems, which pop up randomly, help children gather information from charts or tables and build accurate mathematical expressions.

When you add it all up, the program's equations and word problems can really stretch your math muscles. Unfortunately, math aerobics may not play as well on the home PC — unless players are exceptionally motivated — because there Mutanoid Math Challenge must compete with more enticing adventures, puzzles, and arcade games.

Legacy Software, 9338 Reseda Boulevard, Northridge, CA 91324, (800) 532-7692; IBM PC, Tandy, or compatible; CGA, EGA, VGA; \$49.95, \$69.95 to \$149.95 school price

ROAD & TRACK PRESENTS GRAND PRIX UNLIMITED

By Wayne Kawamoto

Driven a good, fast PC lately? Rather than idling in neutral, driving simulators have accelerated their race toward better graphics images, more features, and greater detail. Now the road warriors of PC driving, *Accolade* and *Electronic Arts*, have hooked up with prominent magazines — *Road & Track* and *Car and Driver*, respectively — in a sprint for the heart of the PC car enthusiast. Gentlemen, start your PCs — and hold the presses.

First on the course is *Accolade's* *Road & Track Presents Grand Prix Unlimited*, a simulator that catapults you into the cockpit of a Formula One race car. No doubt about it — *Road &*

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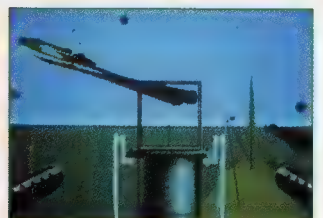
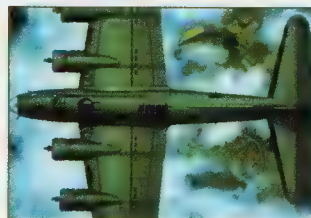


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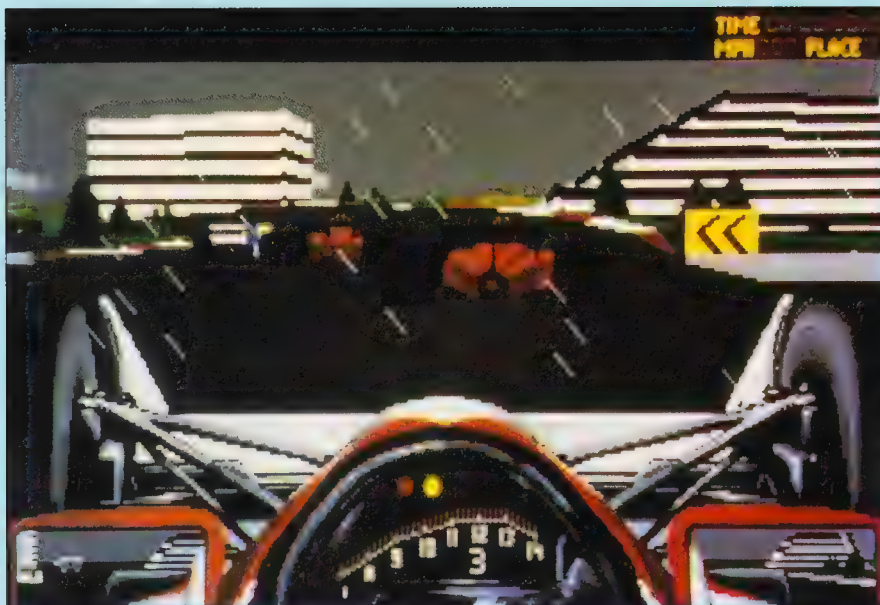
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Road & Track Presents Grand Prix Unlimited dazzles you with its graphics.

Track is part of the next generation of driving simulators.

BUILD A CAR

Road & Track's theme is reminiscent of Accolade's older Grand Prix Circuit, in which you raced Formula One cars through a series of international racetracks. In Road & Track you pick from Williams-Renault, McLaren-Honda, Tyrrell, and Benetton-Ford cars, then lay rubber on tracks such as Monaco, Barcelona, Montreal, Monza, and Phoenix in a single race or an entire circuit.

The first thing you'll notice about Grand Prix is its attention to detail and excellent graphics. You can customize cars, position cameras for instant replays, and even call for unpredictable weather conditions, such as rain. You can also create your own tracks with the game's course architect.

Car customization means more than just adding a fancy paint job or sticking on a decal or two. You can modify the machines' type of tires (because so much is riding on your wheels), brake softness, steering radius, and wing profile and drag.

Changes appear on a pseudo computer-aided-drawing (CAD) grid, reminiscent of Optimum Resource's Car Builder program from some years ago.

While older driving simulators and many arcade race games opt for a behind-the-car view, Accolade's strive to incorporate flight-simulator-style graphics images, which turn your perspective into an out-the-windshield look that intensifies the you-are-there feeling. When compared to Accolade's two-year-old Test Drive III, Road & Track's 3D graphics and exteriors come off as far superior.

Road & Track accommodates beginners by offering a variety of settings and handicaps. The default is center-lane steering, in which the computer steers while you control the speed. Don't laugh. The controls are touchy, particularly at 200 mph, and decent driving takes some practice. You won't spin your wheels getting started with Road & Track, either, thanks to its quality documentation. The manual makes the program sound more difficult to use than it is, thanks to a level of detail that leaves no hood unopened, no gas tank untapped.

Once you're a competent driver, you can steer on your own. Like all driving simulators, though, Road & Track suffers from joystick and keyboard control — neither of those devices makes the simulation feel much like real driving. Coin-op arcade games, with their built-in steering wheels, still have the advantage.

At least Road & Track lets you decide the aggressiveness of your opponents. The computer opponents are ruthless at higher levels — racing at high speeds and blocking your progress at every turn.

THEN BUILD A RACE

Road & Track's course architect, with which you modify existing tracks or create your own, is flexible and easy to use. Different editing functions let you configure your track and layout, and add visual structures, objects, and even hills. Build it, and they will race.

When you want to review that last great move on the track, Road & Track provides a first-rate instant-replay function. Like many games that offer replay, Road & Track uses a VCR-style recorder that even lets you watch the action in reverse.

Equip your PC with a sound board, and you get music and sound effects. Unlike Test Drive III, which gives you a choice of three songs to listen to on the radio, Road & Track gives you only one. I found it strange that the engine's audio effects sound whiny and electronic.

And it's too easy to get disoriented when you spin off the track. Road & Track is missing Test Drive III's one-button back-on-the-track feature. The program also sports some minor animation glitches when you drive on some tracks.

So what do you get from Road & Track? You'll get great graphics, detailed cars, and high performance, that's what. Road & Track qualifies as the next generation of driving simulators — fun to play and visually exciting. For some PC drivers, though, it doesn't compare to the freewheeling Test Drive III: The Passion, with its state troopers and mountainous scenery.

But for most of us stuck-in-traffic drivers, Road & Track is a great way to blow off steam and stress. It's a virtual joyride that doesn't call in the cops or hike up the insurance bills. Accolade practically defined driving games, and if you can find a better driving simulator than Road & Track,

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Accolade, 550 South Winchester Boulevard, Suite 200, San Jose, CA, 95128, (408) 296-8400; IBM PC, Tandy, or compatible; 16MHz or faster recommended, 640K RAM; VGA; supports AdLib, Roland, Sound Blaster; requires hard-disk drive; off-disk copy protection; \$59.95

SCIENCE ADVENTURE

By Heidi E. H. Aycock

Too many multimedia packages rely on expensive CD-ROM technology, then conjure up only shallow, lackluster programs. The possibilities inherent in the alchemy of music, graphics, and text seem to be little more than broken promises.

Science Adventure restores faith in the multimedia movement without demanding that you buy a CD-ROM drive. All it requires is about 8 megabytes of hard-disk space. Knowledge Adventure should be proud. Science Adventure combines the well-written prose of Isaac Asimov with impressive photography and

sound to create an absorbing journey into the unknown.

SHARP SOUNDS, GREAT GRAPHICS

Science Adventure is so complex it could easily have presented an unfriendly first impression. The program's designers, however, devised a simple point-and-click interface in which icons clearly suggest their purpose.

To move from topic to topic in Science Adventure, click just about anywhere. Click on the picture you're reading about and Science Adventure sends you to a new article on a related topic. Click on any of the category icons — *Technology*, *Life*, *Earth and Ecology*, and others — and go to the next event in that area of scientific expertise.

If you have a specific topic you want to investigate, click on the *Library* icon, then on the card-catalogue drawer with the letter that starts the name of your topic.

The program's icons are sharp VGA images, as are the pictures that accompany the text passages. From the opening painting of a medieval man to the photograph of a human fetus, each image is rich, detailed, and well designed.

Science Adventure's sound is just as clear. Play on a Sound Blaster Pro-equipped PC, and each audio effect sounds crisp. Justification for some sounds is less clear, though. It's obvious why Neil Armstrong's famous voice accompanies the passage about the first person on the moon, but it's uncertain why the passage on the planet Jupiter is paired with something that sounds like an old *Star Trek* sound effect.

MADE BY A MASTER

The late Isaac Asimov, the science and science-fiction writer, wrote Science Adventure's text. With a master such as Asimov at the helm, it's no surprise that this program's articles are interesting, humorous, and a pleasure to read.

Actually, Science Adventure's copy is part of Asimov's book *Chronology of Science and Discovery*. You won't miss what's left out, though sometimes the omissions cause confusion. In the discussion of Galileo and the Pope, for instance, the program tells you that Galileo renounced his scientific discoveries during the Inquisition because of the example set by the Italian philosopher Giordano Bruno. But it tells you neither who Bruno was nor what example he set. Multimedia publishers would be wise to rely on the same kinds of editors as do book publishers.

Text not only relates information, but also explains the reason the information is important. Asimov had a knack for highlighting the significance of such abstract concepts as zero (a mere place holder, not a real number). He also couched the facts in interesting contexts. He tells you, for instance, that Alexander Fleming discovered penicillin in 1928, then goes the distance to tell you that it was an accident, a neglected lab dish that grew some bacteria-killing mold.

READY FOR INTERACTION

You make accidental discoveries in Science Adventure as easily as did Fleming. Just click around the screen, traveling from category to category,

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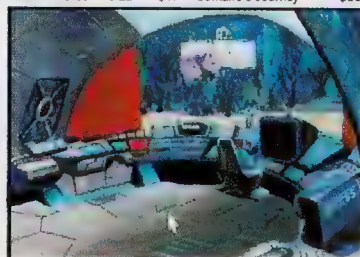
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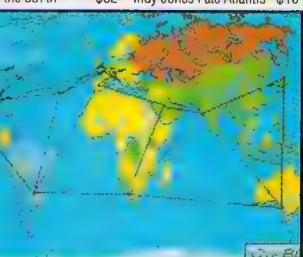


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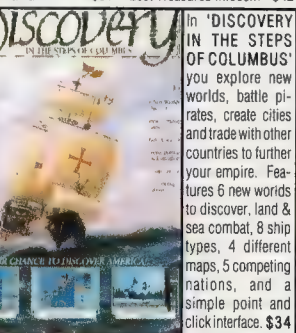


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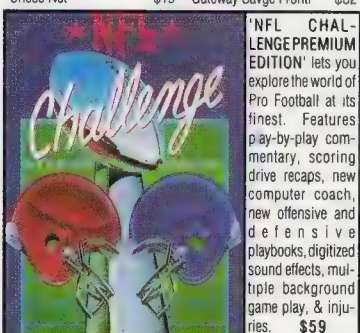


'Might & Magic: Clouds of Xeen' you must read a band of adventurers to bring down the evil Lord Xeen. Features full 256color VGA support, full screen animation, animated icons to warn of danger, auto-mapping, point & click interface, digitized speech, sound effects, & musical score. **\$46**

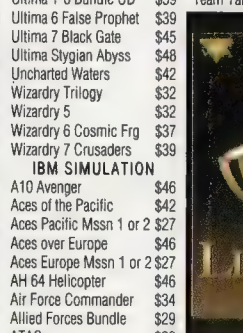
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or let the program decide where you go next.

Because of its open-ended nature, Science Adventure can be valuable as a solo experience. Put a 13-year-old child in front of the computer and let him or her wander through the program. You can give your young explorer a quest — the search for the mechanics of the circulatory system perhaps — or just hand over the mouse and let him or her dive in.

Working within the limitations of the typical home computer (one without a CD-ROM drive), the designers at Knowledge Adventure have created an unusually powerful program. You don't even need a sound card unless you can't bear to miss out on the audio effects. Science Adventure makes realistic demands on your PC while delivering extraordinary results.

Science Adventure is a multimedia program filled with possibilities for enriching experiences, provoking spirited discussions, and encouraging "what if" scenarios. That it comes on floppy, not compact disc, makes it all that much more wonderful.

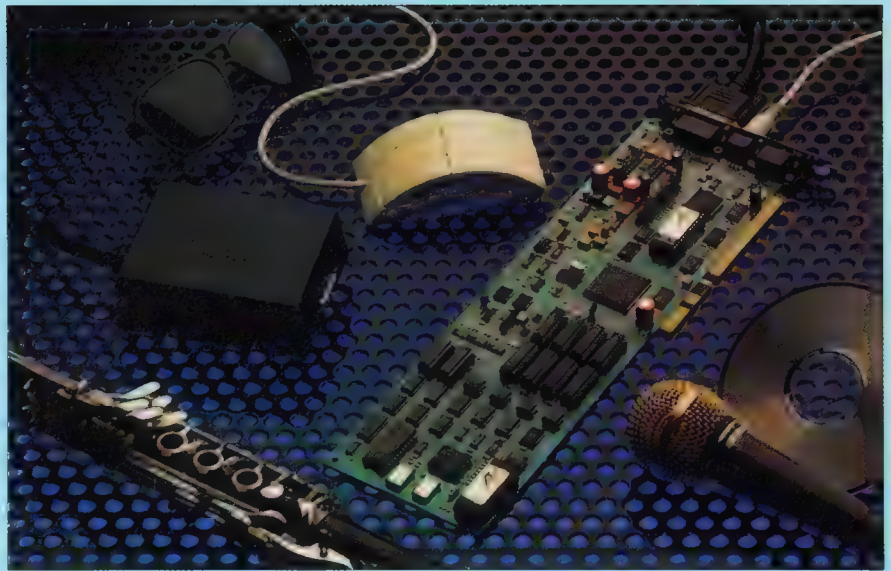
Knowledge Adventure, 4502 Dyer Street, La Crescenta, CA 91214, (800) 542-4240; IBM PC, Tandy, or compatible; VGA; EGA version available; supports Covox Speech Thing, Disney Sound Source, Sound Blaster, Sound Blaster Pro, Thunderboard; requires hard disk, 8MB free space; mouse recommended; \$79.95

VGASTEREO-F/X

By Tom Carlton

CD-ROM + Sound = Multimedia. No way. Not everyone buys into the idea that CD-ROM holds the future of PC games. Plenty of games throw visual delights on screen and push dynamic sounds through speakers without benefit of a compact disc.

If you prefer to stick to disk, but still want to upgrade your game-playing PC's hardware, take a look at ATI's VGAStereo-F/X, a single-board



VGAStereo-F/X: a multifunction, multimedia hardware solution.

symphony of function. As long as you're not looking for CD-ROM, this multifunction, multimedia hardware-upgrade solution meets your needs. VGAStereo-F/X is a fine fit for anyone playing in DOS and Windows.

ON BOARD THE BOARD

What's on board? You'll find flicker-free (non-interlaced) super VGA; 8-bit stereo sound with an 8-watt amplifier, fully compatible with AdLib and Sound Blaster; MIDI (*musical-instrument digital interface*); a joystick port; and a Microsoft mouse port with mouse.

As an overture, the super-VGA graphics controller, ATI's highly touted VGAWonder XL, provides excellent graphics. With 1 megabyte of VRAM, you get graphics resolutions of up to 1024 by 768 with 265 colors, or photo-realistic images of 32,768 colors (15-bit) at resolutions as high as 800 by 600.

Full-time game players had better keep Windows in mind. This graphical user interface and operating environment promises to become even more important to games, as evidenced by a recent spate of Windows releases, with even more just over the horizon. While VGAStereo-F/X's video-speed performance falls short of a graphics accelerator card such as Orchid's

Fahrenheit 1280 or ATI's own Graphics Ultra, it's still respectable. (An accelerator version of VGAStereo-F/X is waiting in the wings.) Its crisp fonts and vivid color graphics are as good as any.

Okay, okay — the graphics images are good. But what about sound? VGAStereo-F/X sounds great. Compatible with and comparable to AdLib, Sound Blaster, and Thunderboard audio cards, this 11-voice synthesizer (a single Yamaha YM3812 synthesizer) with enhanced channel separation simulates stereo sound. If you're hearing voices already, 11 more may be enough. Audiophiles, however, will likely demand more — they'll turn to one of the second-generation 16-bit audio boards that offer double the voices. Keep in mind, though, that you'll find few floppy-based games this year that demand more than VGAStereo-F/X can deliver.

Part of the VGAStereo-F/X sound quality comes from the enhanced sampling rates, up to 44 kilohertz, a rate found in those previously mentioned second-generation boards. VGAStereo-F/X gives you CD-quality sound, almost.

Almost, because VGAStereo-F/X doesn't include either an internal or an external sound jack for audio input (for CD-ROM audio), nor does it

offer multichannel mixing. Gamers shouldn't object too much to either omission, because those items are more for making multimedia, not playing it.

An additional measure of VGAStereo-F/X is its MIDI capability. The accompanying expansion connector box is compatible with MIDI keyboards and other MIDI devices, and offers bidirectional processing with ports for MIDI in/out/thru.

The bundle includes Voyetra's excellent program, the 64-polyphonic-track Sequencer Plus Junior — an application analogous to a word processor, though instead of words, you type and edit musical notes' length, pitch, and position.

The MIDI box lets you record your own stereo sound files. An output jack serves the inexpensive pair of speakers, which work well enough. Or you can connect the VGAStereo-F/X to your own amplifier and speaker system. The multispeed adjustable joystick port provides smooth performance with your stick.

A mouse port and a three-button mouse complete the list of hardware. This is no mutant mouse heading for extinction. It'll survive with the fittest.

FIT FOR FLOPPY

Installing VGAStereo-F/X is simple. It slips into any empty 16-bit full-length slot. Although the libretto-like documentation is unclear at times, thanks to the above-average installation software, proper configuration is easy. Because the board provides a video upgrade, a joystick port, and a first-class mouse, you may have to remove the old video and bus mouse boards. It'll probably be a bit of a fiddle for some, but with generous IRQ settings and I/O addresses, conflicts with other I/O devices can be resolved readily. Technical support is responsive, knowledgeable, and friendly, but not toll free. The bottom-line question you need to answer, though, is this: What games do you have, do you want, or can you buy that justify VGAStereo-F/X's substantial price tag?

In testing for this review, game play with several titles revealed no faults in VGAStereo-F/X. Interplay's Out of This World sang its space-odyssey sounds and displayed its cinematic magic. The new interactive-music (iMUSE) sounds of reggae from LucasArts' game Monkey Island 2: LeChuck's Revenge were exceptionally good. And good ol' Carmen Sandiego Deluxe sounded great.

VGAStereo-F/X's single inconvenience is its inability to deal with CD-ROM. If you're eying CDs for your PC, either look elsewhere or wait a few months for ATI's new MPC upgrade kit. Games such as Wing Commander and Chessmaster 3000 are rapidly being recast on CD.

But if you're playing with a less extravagant symphony — floppy-based games — and you're considering better hardware to improve video resolution and performance while adding a first-generation sound board in the process, VGAStereo-F/X is an outstanding choice. Considering the price of buying the equivalent power as a series of separate components, VGAStereo-F/X is a good value.

ATI Technologies, 3761 Victoria Park Avenue, Scarborough, Ontario M1W3S2, Canada, (416) 756-0718; IBM PC or compatible; DOS 3.0 or later; IBM PS/2 85xx analog, Multisync, or compatible monitor; \$399 1MB VRAM, \$349 512K VRAM

TRUMP'S CASTLE II VIDEO POKER

By Ed Ferrell

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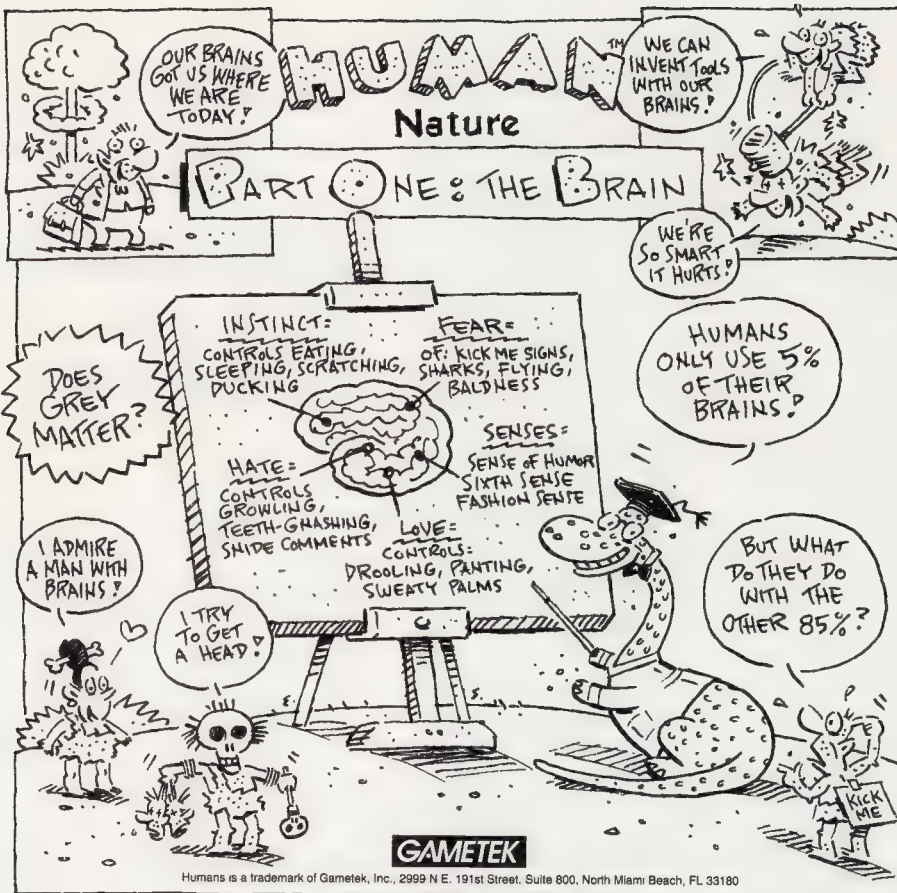
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credit is good, believe me — this is fantasy, pure and simple.

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TRIP THE TRUMP FANTASTIC

Trump's Castle II from Capstone updates the 1988 game and packs it with 1992 technology. Trump's Castle II features a much friendlier interface, multiple-player mode, and lavish graphics even the Don would be proud to call his own.

Everything's here. From the lobby, point and click your way around the casino. Make craps bets, place a roulette chip on red 33, or double down in blackjack. When the cards aren't coming up, just shake hands with a one-armed bandit. Your bankroll goes with you as you stroll from game to game.

Payoffs and odds work within Atlantic City rules, and you can place virtually every bet possible in a real casino. If you prefer real cards to video poker, take a seat at the poker table. (If you feel like a criminal, it's because true poker isn't legal yet in Atlantic City.)

Everybody can lose in multiplayer mode, and the more the merrier. It can be a little awkward passing the keyboard around, but real casino flavor comes only with a crowd. Just make sure they know the drinks aren't free.

For confirmation codes, refer to *Trump's Castle Gaming Guide* — the same one they hand out at Trump's place. It explains all the bets at all the games, and has payoff tables and odds. Capstone purchases these gaming guides from Trump and includes one with the game. (You didn't think he'd donate them, did you?)

A walk around the castle cools you off when the dice refuse to tumble your way. Graphic photos from a bedroom suite to a floor show are



Tour the casino or get right down to betting in Trump's Castle II.

worth a look, even if the screens are slow to load. On top of this slide show, dialogue balloons provide some eavesdropping thrills. In the bridal suite, the man says, "You look wonderful." The woman says, "I'm hungry." Sexist? Sure. But this is Trump's place, isn't it?

It's fun to walk away from bad luck at the slots and get a bite to eat in the hotel restaurant, or catch a comedian in the nightclub. Read the hotel newspaper to see what's happening and check out players' high scores.

But the real action is downstairs. The games play enough like the real thing to keep you coming back long after you tire of touring. I'm betting you'll pass on the floor show and head straight for the baccarat table. And that's exactly what both Capstone and the Don hope.

TWO WONGS MAKE A RIGHT

Stafford Wong's Video Poker has a different twist. Instead of the casino experience — you against the house — this is video poker with an angel on your shoulder.

Dr. Wong, author of *Professional Video Poker* and a recognized gambling authority, was probably the first to take a serious look at video poker. He worked up a winning system, and shares his knowledge in this program.

Set your starting bankroll, pick a machine, and start playing. Win or lose, Dr. Wong monitors your play and gives advice on every aspect of the game, helping you maximize your winnings. In tutorial mode, your misplayed hands are displayed randomly so you can learn your lesson. All popular casino-machine types are included, or you can create your own. Wong puts you in the driver's seat by letting you adjust payoff rates and odds and by giving you an inside view of how the casinos program payouts. Saving benchmark hands and running them under different payout schedules help illustrate where your best bets are.

Depending on your aspirations, you can limit Wong to notify you only when you make a major mistake. When you think you're good enough, turn off Wong completely. With no expert on-line advice, you take on the machines *mano a mano*, just as in the casinos.

Three levels of sound supply the ambience of a packed casino, and multiplayer mode doubles your pleasure. What fun is it to win anyway, if your friends aren't there to see it? In tournament play you can race the clock, or play until one person earns a certain amount in coin. For the fanatically competitive, the *Hands*



The screens are cartoonish, but the play is real in Video Poker.

option deals the same 100 hands to each player, so there's no doubt as to who paid attention to Wong.

The screens in Wong's Video Poker are more cartoonish than real, but the play is real enough. And there may be more to Wong's game than just a bit of digital fun. He does have a system, one that works. Wong is a pen name — the good doctor keeps his real identity secret so he can gamble professionally at the casinos.

Wong or not, as you perfect your own system in Video Poker or Trump's Castle, it's helpful to keep reminding yourself that these are only games. The best system almost always plays differently at a real casino. Instead of risking your hard-earned cash on real gambling, take the sure bet and pick up one of these great gambling simulations. You'll be surprised how much it hurts to lose — even in electronic money.

And it never hurts to be ready for the future. Connecting bank accounts to Atlantic City and Las Vegas isn't that far away. (Minnesota recently toyed with the idea of linking Nintendo video machines to the state's lottery.) Sooner or later, you'll be able to gamble on the PC with real money. At least you'll be able to lose your shirt without getting out of your bathrobe.

Trump's Castle II: Capstone, 14540 Southwest 136th Street, Suite 204, Miami, FL 33186, (305) 252-9040, (800) 468-7226; IBM PC, Tandy, or compatible; 640K RAM VGA, 512K RAM CGA, EGA, Tandy 16-color; supports AdLib, Sound Blaster; hard-disk drive recommended; \$79.95

Video Poker: Villa Crespo, 1725 McGovern Street, Highland Park, IL 60035, (708) 433-0500; IBM PC, Tandy, or compatible; 384K RAM; CGA, EGA, VGA; supports AdLib, Sound Blaster, Sound Master II, Speech Thing; hard-disk drive recommended; \$49.95

AMERICAN GLADIATORS

By Cameron Crotty

American Gladiators is the live-action TV show that wants to be a video game. Ordinary people — plumbers from Penobscot, weight lifters from Weehauken, and secretaries from Springfield — climb into pads and protective headgear to do battle in a series of manufactured athletic events with comic-book characters come to life.

Ostensibly, these everyday Janes and Joes are the heroes of American Gladiators, but anyone who's watched the show will tell you that the real stars are the gladiators. Layered with muscle, wrapped in brightly colored tunics, and tagged with searing one-word nicknames, they're more like mythic guardians of a fantasy world than real people.

The eponymous video-game version of *American Gladiators*, published by GameTek, offers seven of the television show's most-popular events. While GameTek certainly hopes to attract the arcade gamer, *American Gladiators* will appeal primarily to fans of the boob tube. The opening sequence (which, thank goodness, you can skip at the press of a button) is a nonstop slide show of digitized portraits of the gladiators, complete with names, vital statistics, and biographies. It's interesting, though, that once the game starts, all the gladiators become anonymous, gray-suited opponents, with none of the individual speed or strength characteristics touted by the opening screens. GameTek missed it on that one.

CHANGE THE CHANNEL

To play *American Gladiators*, you enter up to seven player names in a tournament. (The computer fleshes out the roster if you play with fewer than seven.) During each round, you must accumulate more points than your opponent in a series of seven contests. You also can play against a friend in a head-to-head option, but one of you must use the keyboard.

American Gladiators is pure competition; you can't even practice individual events. That's an understandable design strategy, and it helps create the "I'll play just one more time" mentality so vital to arcade-game success. On the other hand, if you're having problems with just one event, it's frustrating when you're forced to endure an entire tournament.

None of the game's seven events lasts more than a minute (you're timed, just as on the show) and while

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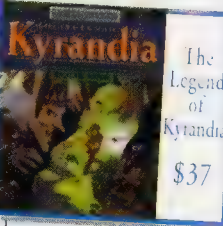
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a few leave you wanting more, most are boring exercises in joystick twitching. Worthy of note are *Joust*, *Powerball*, and *Atlasphere* — they alone feature a high level of playability and offer reasonable entertainment value.

Joust is a stripped-down hand-to-hand combat game. Armed with a pugil stick and balanced atop a pedestal, you must knock out your gladiator opponent with a combination of jabs, blows, and whirling strikes. In *Powerball*, you try to slam-dunk balls into baskets while avoiding a roving team of gladiators. The most innovative event, *Atlasphere*, places you, your opponent, and two gladiators inside huge metal spheres, which you maneuver around like a gerbil on an exercise wheel. To score, you roll your sphere into sloped cups, which sets off a blast of theatrical smoke.

All the events in *American Gladiators*' remaining quartet are fatally flawed. *The Wall*, a climb-and-chase event, is repetitive and mastered

easily. *Assault*, in which you dodge air-powered tennis balls while trying to shoot a target, has more flair, but is also disappointingly easy. *The Eliminator* is a glorified obstacle course you navigate by flicking your joystick back and forth to make your character run or climb.

The last event, the ludicrous *Human Cannonball*, has you swinging from a rope, trying to knock a padded gladiator off a pedestal. To aid you in your challenge, you get two unmarked bars, which the manual calls *Power* and *Angle*. These bars move up and down at a preset speed, and you freeze them into position by clicking a button.

How much power should you use? Exactly what angle are you adjusting, anyway? What difference do the settings make? Except for a coy hint on page 17 — "This event is all down to personal judgment and timing. No clues!" — you won't get any help from *American Gladiators*.

For all its potential, GameTek's *American Gladiators* spends more time in the heady clouds of pop-icon worship than in the meatier métier of solid game play. The VGA graphics images are smooth, colorful, and interesting throughout, but the action simply rehashes ground broken years ago by numerous Olympic-style sports packages.

NIELSEN RATINGS

The events in TV's *American Gladiators* are offbeat and interesting, but GameTek's version reduces them to hackneyed revisions of late-'80s software. Send this Gladiator back to the dressing room for less make-up and more muscle. □

GameTek, 2999 Northeast 191st Street, North Miami Beach, FL 33180, (305) 935-3995; IBM PC, Tandy, or compatible; 640K RAM, DOS 2.1 or later; VGA, EGA; supports AdLib, Roland; joystick optional; \$39.95

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THE NAME OF THE GAME IS

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OCTOBER 1992 • 77

DESIGNERS' NOTES

TEAMWORK

Imagination vs. programming constraints, puzzle challenge vs. action graphics: Maintaining a delicate balance in adventure-game design is an adventure in itself.

By Lori and Corey Cole

You stand before the massive gates of the Citadel of Fire. The heat radiating from the iron doors scorches your hands through your plate gauntlets as you try to force the doors open. You know the Seventh Sigil of Silandra lies somewhere within this fiery fortress, but you must find it before your Dark Brother completes the Summoning.

Juggling Act

Adventure-game design isn't as easy as it seems. It's a balancing act that juggles concept, plot, characterization, visuals, puzzles, and player interaction. A game designer needs to know about programming, writing, art, theater, music, and games. (Let's not forget that important one.)

The designer also needs communication and management skills to help the development team bring the creative vision to life — on time and under budget.

In other words, no one can do it. Well, hardly anyone. In our case, it takes two. Lori has a background



Designers Lori and Corey Cole pursue their Quest for Glory.

in creative writing, art, and theater. Corey is the programmer and editor. We both play music and games, lots of games. (We first met while playing Dungeons & Dragons at a science-fiction convention.) When we sit down to design a computer game, we do it as a team.

The Right Ingredients

It's a mixture of fun and hard work. We have the most fun in the beginning, when we come up with crazy ideas and work out the basic concepts of a game — the theme, setting, plot, characters, and mood. That involves a lot of discussion, some heated arguments, hours of impassioned brainstorming, and dozens of sleepless nights figuring out how to tie the game together. And that's the easy part.

Once we have a basic idea of where the game is going, the real art of game design

begins — turning a story into a fun, interactive game. How can the fighter get through the burning gates of the Citadel? More importantly, how will the player try to get through the gates, and what should happen as a result?

To make the game fair, fun, and challenging, we have to think as players will (or at least as we expect they will). Of course, something that's an enjoyable challenge for a puzzle maniac may be tedium for a hack-'n'-slasher. What's fun for one may not be fun for all. Our job is to find a way to show every player a good time.

Details, Details

Then the real work begins. We describe each situation in excruciating detail to the artists and programmers on the team. What should the Citadel look like? How do the gates open? What awaits the player on the other side?

Lori directs the team while Corey helps work out the programming issues. Now the talents of the whole team really come into play. It takes the efforts and unique contributions of all its members to make a good game into a great game.

Meanwhile, we really have some writing to do — each game in our **Quest for Glory** series, for example, contains as much text as a full-length novel.

Lori provides clues to the story and brings the characters to life through their dialogue and interaction with the player.

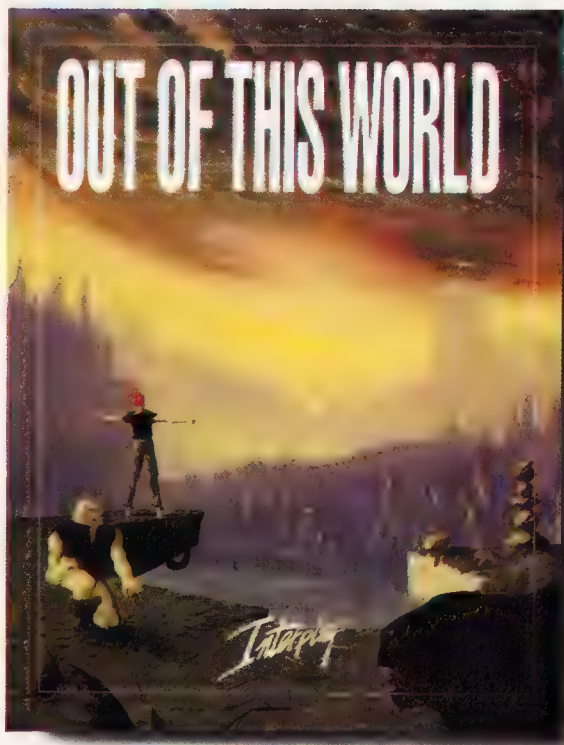
Corey helps create the mood and humor by writing descriptive text for locations and objects — such as what the player sees, and what happens when the fighter hits the burning iron gates with a water balloon.

Finally we play the game — over and over. We make sure the overall flow of the game and the individual puzzles as well are playable and fun.

The fighter gets the Sigil and saves the world, and we sign off and watch the boxes go out the door. Then we start the process all over again. □

Lori and Corey Cole play tag-team in adventure-game design, and are best known as the creators of Sierra's Quest for Glory series.

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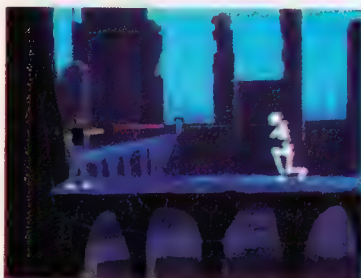
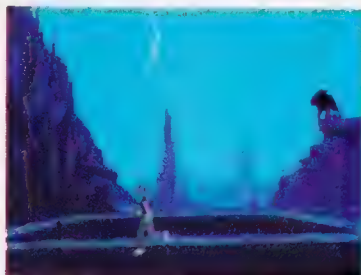


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THE BIG PICTURE

By Gregg Keizer

Maybe Ross Perot isn't just a flash in the pan. Even though he *says* he's dropped out, maybe, just maybe, he'll be hot on the trail of the White House again when you read this, just weeks away from the election.

We'd be smart to make Ross play boss in **Global Effect**, one of the latest simulations to put the player on an Olympic mountain-top. At least then we'd have a better idea of how he would behave as president when environmental and defense issues come up.

Global Effect occupies the same niche as games like SimCity, SimEarth, Balance of Power, and Balance of the Planet. All these simulations make you a manager; SimCity, for instance, asks you to run an urban sprawl, while Planet demands some tough decisions about the environment. But this one's no knock-off. Global Effect is a fascinating hybrid of conflict and climate that's more entertaining and accessible than its ancestors.

Rather than work the micro-management side of the simulation street, Global Effect takes a macro approach. You won't see any tiny lifeforms in this game — you play on a bigger, broader scale.

Global Effect gives you eight possible planets to play with, from an old,

exhausted world that's hot and hostile to a young globe rich in fossil fuels. And if you don't like any of the scenarios, you can build your own planet, or try to save one of four worlds in danger.

You can go it alone, play against the computer, or even take on a human opponent via modem. Play against the computer if you dare — it's tough, merciless, and stops at nothing. More enjoyable is to turn on a friend, someone who may make a mistake or two.

A single screen puts all the controls in one place, and everything runs with the mouse. But the power bar at the left should be your focal point: Everything you do comes at a price. Move the map to see a different part of the screen and the bar goes down. Plant trees and it goes down. Build military hardware and it *really* goes down.

It's an interesting way to limit godlike temptations.

Your chore is to create a viable civilization without wrecking havoc on the planet. It's no easy job. Global Effect may open like SimCity — you spend a lot of time building, then managing metropolitan growth — but the decisions are different. To grow a city and keep it functioning, you're forced into coal-, oil-, or nuclear-fired power plants. All dirty the environment. The greedier and more grandiose your development plans, the filthier things get. Slews of graphs and maps — yes, they cost power, too — show damage.

But unlike the benign world of SimCity, Global Effect's can bristle with weapons. In fact, it's almost as much a war game as it is a planetary-management simulation. It's all too easy in Global Effect to let the environment go to hell

while building airbases, missile sites, and early-warning stations. If you're playing a mad-dog computer opponent or an aggressive human, you may have no choice but to arm in defense. Less politically correct players will opt for the weapons solution, then push the nuclear trigger. You haven't seen an environmental catastrophe until you've seen lands laid waste by atomics.

Beyond the basics, Global Effect includes lots of window dressing, like seismic and volcanic activity (you can't control either of them, though, as you can in SimEarth) and technology investment. Its impact is impressive, because it feels like a game, not a disguised spreadsheet. Still, you can't help but learn, particularly about energy use, recycling, population growth, and the collateral damage of conflict.

Maybe we should make every candidate — not just Ross Perot — play a few rounds of Global Effect before we hand him the keys to the White House. It couldn't hurt. □



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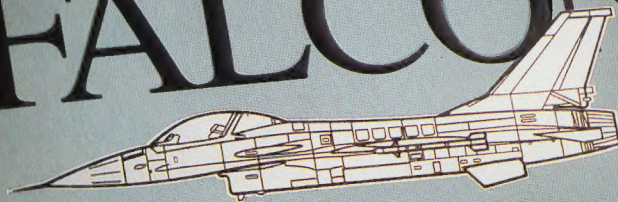
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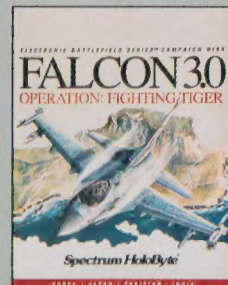
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